



#19

<10>

Searle/Monsanto
Phippard, Deborah
Vasanthakamur, Geetha
Dotson, Stanton
Ma, Xiao-Jun

<120> Osteoarthritis tissue-derived nucleic acids, polypeptides,
vectors, and cells

<130> SO-3221 PR

<160> 82

<210> 1

<211> 310

<212> DNA

<213> Homo sapiens

<400> 1

cagaaataact ctttctgcac agaccacact gttttggttc agactcgagg aggaaattcc 60
aatggtgcct tgtgccactt ccccttccta tacaacaacc acaattacac tgattgcact 120
tctgagggca gaagagacaa catgaagtgg tgtgggacca cacagaacta tgatgccgac 180
cagaagtttg ggttctgccc catggctgcc cagcaggaaa tctgcacaac caatgaaggg 240
gtcatgtacc gcattggaga tcagtgggat aagcagcatg acatgggttc acatgatgag 300
gtgcacgttt 310

<210> 2

<211> 1986

<212> DNA

<213> Homo sapiens

<400> 2

cttgggtgt ctttctccc cacgttcacc tgcacttcgt tagagagcag tgttcacatg 60
ccacaccaca agatccccac aatgacataa ctccattcag agactggcgt gactgggctg 120
ggctctcccca ccccccttca gctcttgat cactcagaat ctggcagcca gttccgtcct 180
gacagagttc acagcatata ttggtggatt cttgtccata gtgcatctgc ttttaagaatt 240
aacgaaagca gtgtcaagac agtaaggatt caaaccattt gccaaaaatg agtctaagt 300
catttactct ctctctggca ttgattggtg gtaccagtgg ccagtactat gattatgatt 360
ttcccctatc aatttatggg caatcatcac caaactgtgc accagaatgt aactgccctg 420
aaagctaccc aagtgccatg tactgtgatg agctgaaatt gaaaagtgt ccaatgggtg 480
ctcttgaat caagtatctt taccttagga ataaccagat tgaccatatt gatgaaaagg 540
cctttgagaa tgtaactgat ctgcagtggc tcattctaga tcacaacctt ctagaaaact 600
ccaagataaa agggagagtt ttctctaaat tgaaacaact gaagaagctg catataaacc 660
acaacaacct gacagagtct gtgggcccac ttcccaaact tctggaggat ctgcagctta 720
ctcataacaa gatcaciaag ctgggtctct ttgaaggatt ggtaaacctg accttcaccc 780
atctccagca caatcggctg aaagaggatg ctgtttcagc tgcttttaaa ggtcttaaat 840
cactcgaata ccttgacttg agcttcaatc agatagccag actgccttct gggctctcct 900
gtctctcttc taactctcta cttagacaac aataagatca gcaacatccc tgatgagtat 960

ttcaagcggtt ttaatgcatt gcagtatctg cgtttatctc acaacgaact ggctgatagt 1020
 ggaataacctg gaaattcttt caatgtgtca tccctgggtg agctggatct gtcctataac 1080
 aagcttaaaa acataccaac tgtcaatgaa aaccttgaaa actattacct ggaggtcaat 1140
 caacttgaga agtttgacat aaagagcttc tgcaagatcc tggggccatt atcctactcc 1200
 aagatcaagc atttgcggtt ggatggcaat cgcactctcag aaaccagtct tccaccggat 1260
 atgtatgaat gtctacgtgt tgctaacgaa gtcactctta attaatatct gtatcctgga 1320
 acaatatctt atgggttatgt ttttctgtgt gtcagttttc atagtatcca tttttatta 1380
 ctgtttatta cttccatgaa ttttaaaatc tgaggggaaat gttttgtaaa catttatctt 1440
 ttttaagaa aagatgaaag gcaggcctat ttcatacaca gaacacacac atatacacga 1500
 atagacatca aactcaatgc tttatttgta aatttagtgt ttttttattt ctactgtcaa 1560
 atgatgtgca aaacctttta ctggttgcat ggaaatcagc caagttttat aatccttaaa 1620
 tcttaatggt cctcaaagct tggattaaat acatatggat gttactctct tgcaccaaatt 1680
 tatcttgata cattcaaatt tgtctgggtt aaaaataggt ggtagatatt gaggccaaaga 1740
 atattgcaaa atacatgaag cttcatgcac ttaaagaagt atttttagaa taagaatttg 1800
 catacttacc tagtgaaact tttctagaat tttttttcac tctaagtcac gtatgtttct 1860
 ctttgattat ttgcatgtta tgtttaataa gctactagca aaataaaaaca tagcaaattg 1920
 catcactgtg tttgacttct tgtgaaattt ctgtactttg tatataaaat acataaaaaca 1980
 atagat 1986

<210> 3
 <211> 920
 <212> DNA
 <213> Homo sapiens
 <400> 3

ccgagagtcg tcgggggtttc ctgcttcaac agtgcttgga cggaacccgg cgctcgttcc 60
 ccaccccggc cggecgccca tagccagccc tccgtcacct cttcaccgca cctcgggact 120
 gccccaaggc ccccgccgc gctccagcgc cgcgcagcca ccgccgccgc cgccgcctct 180
 ccttagtcgc cgccatgacg accgcgtcca cctcgcaggt gcgccagaac taccaccagg 240
 actcagaggc cgccatcaac cgccagatca acctggagct ctacgcctcc tacgtttacc 300
 tgtccatgtc ttactacttt gaccgcgatg atgtggcttt gaagaacttt gccaaatact 360
 ttcttcacca atctcatgag gagaggggaa atgctgagaa actgatgaag ctgcagaacc 420
 aacgaggtgg ccgaatcttc cttcaggata tcaagaaacc agactgtgat gactgggaga 480
 gcgggctgaa tgcaatggag tgtgcattac atttggaaaa aatgtgaat cagtcaactac 540
 tggaactgca caaactggcc actgacaaaa atgaccccca tttgtgtgac ttcattgaga 600
 cacattacct gaatgagcag gtgaaagcca tcaaagaatt ggggtgaccac gtgaccaact 660
 tgcgcaagat gggagcgccc gaatctggct tggcggaata tctctttgac aagcacaccc 720
 tgggagacag tgataatgaa agctaagcct cgggctaatt tccccatagc cgtgggggtga 780
 cttccctggt caccaaggca gtgcatgcat gttgggggtt cctttacctt ttctataagt 840

tgtacaaaa catccactta agttctttga tttgtaccat tccttcaa at aaagaaattt 900
 ggtaccagg aaaaaaaaaa 920

<210> 4
 <211> 2139
 <212> DNA
 <213> Homo sapiens

<400> 4
 caggcgatac ttctgttgc cgggacgcta tatataacgt gatgagcgca cgggctgcgg 60
 agacgcaccg gagcgctcgc ccagccgccg cctccaagcc cctgaggttt cgggggacca 120
 caatgaacaa cttgctgtgc tgcgcgcttc gtgtttcttg acatctccat taagtggacc 180
 acccaggaaa cgtttcctcc aaagtacctt cattatgacg aagaaacctc tcacagctg 240
 ttgtgtgaca aatgtcctcc tggtagctac ctaaaacaac actgtacagc aaagtggaaag 300
 accgtgtgcg ccccttgccc tgaccactac tacacagaca gctggcacac cagtgcagag 360
 tgtctatact gcagccccgt gtgcaaggag ctgcagtacg tcaagcagga gtgcaatcgc 420
 acccacaacc gcgtgtgcga atgcaaggaa gggcgctacc ttgagataga gttctgcttg 480
 aaacatagga gctgccctcc tggatttgga gtggtgcaag ctggaacccc agagcgaaat 540
 acagtttgca aaagatgtcc agatgggttc ttctcaa atg agacgtcatc taaagcacc 600
 tgtagaaaac acacaaattg cagtgtcttt ggtctcctgc taactcagaa aggaaatgca 660
 acacacgaca acatatgttc cggaaacagt gaatcaactc aaaaatgtgg aatagatgtt 720
 accctgtgtg aggaggcatt cttcaggttt gctgttctca caaagtttac gcctaactgg 780
 cttagtgtct tggtagacaa tttgcctggc accaaagtaa acgcagagag ttagagagg 840
 ataaaacggc aacacagctc acaagaacag actttccagc tgctgaagtt atggaaacat 900
 caaaacaaag accaagatat agtcaagaag atcatccaag atattgacct ctgtgaaaac 960
 agcgtgcagc ggcacattgg acatgctaac ctcaccttcg agcagcttcg tagcttgatg 1020
 gaaagcttac cgggaaagaa agtgggagca gaagacattg aaaaaacaat aaaggcatgc 1080
 aaaccagtg accagatcct gaagctgctc agtttggtgg gaataaaaaa tggcgaccaa 1140
 gacacctga agggccta at gcacgcacta aagcactgca aagacgtacc actttcccaa 1200
 aactgtcact cagagtctaa agaagacat caggttcctt cacagcttca caatgtacaa 1260
 attgtatcag aagttat ttt tagaaatgat aggtaaccag gtccaatcag taaaaataag 1320
 ctgcttataa ctggaaatgg ccattgagct gtttcctcac aattggcgag atcccatgga 1380
 tgagtaaact gtttctcagg cacttgaggc ttctcagtga atctttctca ttaccagtga 1440
 ctaattttgc cacagggtac taaaagaaac tatgatgtgg agaaaggact aacatctcct 1500
 ccaataaacc ccaaatggtt aatccaactg tcagatctgg atcgttatct actgactata 1560
 ttttccctta ttactgcttg cagtaattca actggaaatt aaaaaaaaaa aactagactc 1620
 cattgtgcct tactaaatat gggaaatgtct aacttaaata gctttgagat ttcagctatg 1680
 ctagaggctt ttattagaaa gccatatttt tttctgtaaa agttactaat atatctgtaa 1740
 cactattaca gtattgctat ttatattcat tcagatataa gatttggtaca tattatcatc 1800

ctataaagaa acggtatgac ttaatttttag aaagaaaatt atattctgtt tattatgaca 1860
aatgaaagag aaaatatata tttttaatgg aaagtttgta gcatttttct aataggtact 1920
gccatatttt tctgtgtgga gtatttttat aattttatct gtataagctg taatatcatt 1980
ttatagaaaa tgcattattht agtcaattgt ttaatgttgg aaaacatatg aaatataaat 2040
tatctgaata ttagatgctc tgagaaattg aatgtacctt atttaaaaga ttttatgggt 2100
ttataactat ataaatgaca ttattaaagt tttcaaatt 2139

<210> 5
<211> 157
<212> DNA
<213> Homo sapiens

<400> 5

cccaatacta agctcctctg gttagagcca gccatgagag aaactccaag tacttctgac 60
tggttctctc tctactcatc cacccttag gtggctgcag aaggaactct gtgcaacccc 120
cagagttctc attctcagtg acagggaaat gtaatga 157

<210> 6
<211> 2263
<212> DNA
<213> Homo sapiens
<220>
<221> 1-2263
<222> unknown

<223> unsure at all n locations
<400> 6

acctctgacc acaacaaacc cctactccac cgggtcttgt ttgtcccacc cttggtgacg 60
cagagcccca gccagaccc cgcccaaagc actcatttaa ctggtattgc ggancacgag 120
gcttctgctt actgcaactc gctccggccg ctgggcgtag tgcgactcgg cggagtcacc 180
gcggcgcgctc cttgttctaa cccggcgccg catgaccgtc gcgcggccga gcgtgcccgc 240
ggcgctgccc ctccctgggg agctgccccg gctgctgctg ctggtgctgt tgtgcctgcc 300
ggcgtgtggt ggtgactgtg gccttcccc agatgtacct aatgccagc cagctttgga 360
aggccgtaca agttttcccg aggatactgt aataacgtac aaatgtgaag aaagctttgt 420
gaaaattcct ggcgagaagg actcagtgat ctgccttaag ggcagtcaat ggtcagatat 480
tgaagagttc tgcaatcgta gctgcgaggt gccacaagg ctaaattctg catccctcaa 540
acagccttat atcactcaga attattttcc agtcgggtact gttgtggaat atgagtgccg 600
tccaggttac agaagagaac cttctctatc accaaaacta acttgccttc agaatttaaa 660
atgggtccaca gcagtcgaat tttgtaaaaa gaaatcatgc cctaaccgg gagaaatacg 720
aaatggctcag attgatgtac caggtggcat attatttggg gcaaccatgc tccttctcat 780
gtaacacagg gtacaaatta tttggctcga cttctagttt ttgtcttatt tcaggcagct 840
ctgtccagtg gagtgacccg ttgccagagt gcagagaaat ttattgtcca gcaccaccac 900
aaattgacaa tggaataatt caaggggaac gtgaccatta tggatataga cagtctgtaa 960
cgtatgcatg taataaagga ttcacatga ttggagagca ctctatttat tgtactgtga 1020

ataatgatga aggagagtgg agtggcccccac cacctgaatg cagaggaaaa tctctaactt 1080
 ccaaggtccc accaacagtt cagaaacctt ccacagtaaa tgttccaact acagaagtct 1140
 caccaacttc tcagaaaacc accacaaaaa ccaccacacc aaatgctcaa gcaacacgga 1200
 gtacacctgt ttccaggaca accaagcatt ttcattgaaac aaccccaaatt aaaggaagtg 1260
 gaaccacttc aggtactacc cgtcttctat ctgggcacac gtgtttcacg ttgacagggtt 1320
 tgcttgggac gctagtaacc atgggcttgc tgacttagcc aaagaagagt taagaagaaa 1380
 atacacacaa gtatacagac tgttcctagt ttcttagact tatctgcata ttggataaaa 1440
 taaatgcaat tgtgctcttc atttaggatg ctttcattgt ctttaagatg tgtttaggaat 1500
 gtcaacagag caaggagaaa aaaggcagtc ctggaatcac attcttagca cacctacacc 1560
 tcttgaaaat agaacaactt gcagaattga gagtgattcc tttcctaaaa gtgtaagaaa 1620
 gcatagagat ttgttcgtat ttagaatggg atcacgagga aaagagaagg aaagtgattt 1680
 ttttccacaa gatctgtaat gttatttcca cttataaagg aaataaaaaa tgaaaaacat 1740
 tatttggata tcaaaagcaa ataaaaacc aattcagtc cttctaagca aaattgctaa 1800
 agagagatga accacattat aaagtaatct ttggctgtaa ggcattttca tctttccttc 1860
 gggttggcaa aatattttta aggtaaaaca tgctggtgaa ccaggggtgt tgatggtgat 1920
 aagggaggaa tatagaatga aagactgaat cttcctttgt tgcacaaata gagtttggaa 1980
 aaagcctgtg aaaggtgtct tctttgactt aatgtcttta aaagtatcca gagatactac 2040
 aatattaaca taagaaaaga ttatatatta tttctgaatc gagatgtcca tagtcaaatt 2100
 tgtaaattctt attcttttgt aatatttatt tatatttatt tatgacagtg aacattctga 2160
 ttttacatgt aaaacaagaa aagttgaaga agatatgtga agaaaaatgt atttttccta 2220
 aatagaaata aatgatccca ttttttggta aaaaaaaaaa aaa 2263

<210> 7
 <211> 712
 <212> DNA
 <213> Homo sapiens
 <400> 7

cttaaaccta ttttagtaat ttttcccaag tttatttttt atttttaatt ttttcccaa 60
 gtttattttt ctattttttt ttcattggaaa aatggggtaa ctttagcagtt tcaatattga 120
 agactgaagt ttaaaaaaaaa tttaaattca aggtactttt aaaattcagt tagaaaagta 180
 ggcttttaaaa attatttagag acaagagtac caaagcggtg tgtgtatgtg tgtgtgtgta 240
 tgcattgctt tggtattggaa aaacttttga gactgattac ttttcattat atatgtgtca 300
 cagtgaacaa gcttttatgt gtcattgtaag attattgctt gcctctctaa ggaaggctgt 360
 gactgtttta atagacgggc aagggtggaac cttttgaaag atgagctttt gaataataagt 420
 tgtctgctag atcatgggtt gtattgaact aacaagggtt gcagatctgc tgacttatat 480
 aaagcttttt gattcctact aagctttaag atttaaaaaa tgttcaatgt tgaaatttct 540
 gtggggctct atttttgctt tggctttctg gtgagagagt gaggaagcat tctttccttc 600
 actaagtttg tctttcttgt cttctggata gattgatttt aagagactaa gggaatttac 660

aaactaaaga ttttagtcat ctggtggaaa aggagacttt aagattgttt ag

712

<210> 8
 <211> 1474
 <212> DNA
 <213> Homo sapiens
 <400> 8

ctcagtggat aaaagaccta gagaatgtgt atcccagaag aagctggcca aggatatggg 60
 agcaaccacc atgggaccag aagtctctct ggggcagggtg tagtgggtctt gctgcttctc 120
 cagggaggga tctgcctaca aactggtttg ctactttacc aactgggtcc caggaccggc 180
 aggaaccagg aaaattcacc cctgaggaat attgaccctt tcttatgtct tcatctcatc 240
 tattcattgc gccagcatcg aaaacaacaa gggttatcatc aaggacaaga gtgaagtgat 300
 gctctaccag accatcaaca gttctcaaaa ccaagaatcc caaactgaaa attctcttgt 360
 ccattggagg gtacctgttt gggtccaaag gggtccaccc tatgggtgat tcttctacat 420
 cacgcttgga attcattaac tccataatcc tggttctgag gaaccataac tttgatggac 480
 tggatgtaag ctggatctac ccagatcaga aaaaaaacac tcatttctact gtgctgattc 540
 atgagttagc agaagccttt cagaaggact tcacaaaatc caccaaggaa aggcttctct 600
 tgactgcggg gggatatctgc agggaggcaa atgattgata acagctatca agttgagaaa 660
 ctggcaaaaag atctggattt catcaacctc ctgtcctttg acttccatgg gtcttgggaa 720
 aagcccctta tcaactggcca caacagccct gctgagcaag ggggtggcagg acagagggcc 780
 aagctcctac tacaatgttg aatatgtctg ggggtactgg atacataagg gaatgccatc 840
 agagaagggtg gtcattgggca tccccacata tggggcactc cttcacactg gcctctgcag 900
 aaaccaccgt gggggcccct gcctctggcc ctggagctgc tggaccatc acagagtctt 960
 caggcttctt ggcctattat gagatctgcc agttcctgaa aggagccaag atcacgcggc 1020
 tccaggatca gcaggttccc tacgcagtca aggggaacca gtgggtgggc tatgatgatg 1080
 tgaagagtat ggagaccaag gttcagttct taaagaattt aaacctggga ggagccatga 1140
 tctgggtctat tgacatggat gacttcaact gcaaatcctg caaccagggc ccttaccctc 1200
 ttgtccaagc agtcaagaga agccttggct ccctgtgaag gattaactta cagagaagca 1260
 ggcaagatga ccttgcctgc tggggcctgc tctctcccag gaattctcat gtgggattcc 1320
 ccttgccagg ccggcctttg gatctctctt ccaagcctt cctgacttcc tcttagatca 1380
 tagattggac ctggttttgt tttcctgcag ctgttgactt gttgccctga agtacaataa 1440
 aaaaaattca ttttgctcca gtaaaaaaaaa aaaa 1474

<210> 9
 <211> 592
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> 1-592
 <222> unknown
 <223> unsure at all n locations
 <400> 9

```

actttcctgg tgacgctttg cttttcttct gctcttggtg agaaagtgcc tccttcttcc 60
caggatcagg acctctgcc a ccagcgcca caaagagaca tttctgcaca cacactnnnn 120
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nncagagac aaacttaagg tgaggagaaa 180
gagcgctagt ttcacttgat ctccagcttc caacttaagc agaacttgag agcatccgaa 240
ctcctggatt tcaggacaag tgaagaagat tctttgggct ataaagatga agagtctact 300
tcttctggtg ctgatttcaa tctgctgggc tgatcatctt tcagacaact atactctgga 360
tcatgacaga gctattcaca tccaagcaga aaatgggccc ccatctactt gtggaagcag 420
agcaagccaa ggtgttttca caccagaggt ggcaatgtta cactgccatg taaattttat 480
cgagacccta cagcatttgg ctcaggaatc cataaaatcc gaattaagtg gaccaagcta 540
acttcggatt acctcaagga agtggatggt tttgtttcca tgggatacca ca 592

```

```

<210>      10
<211>      2004
<212>      DNA
<213>      Homo sapiens
<400>      10

```

```

gcgaccgccc cctgtgatcc agcgagcgcg gtcgtccttg gtggaaggaa ccatgaactg 60
gcatctcccc ctcttctctt tggcctctgt gacgctgcct tccatctgct cccacttcaa 120
tcctctgtct ctcgaggaac taggctccaa cacggggatc cagggttttca atcagattgt 180
gaagtcgagg cctcatgaca acatcgtgat ctctcccat gggattgcgt cggctctggg 240
gatgcttcag ctggggggcg acggcaggac caagaagcag ctgccatgg tgatgagata 300
cggcgtaaat ggagttggta aaatattaaa gaagatcaac aaggccatcg tctccaagaa 360
gaataaagac attgtgacag tggctaacgc cgtgtttgtt aagaatgcct ctgaaattga 420
agtgcctttt gttacaagga acaaagatgt gttccagtgt gaggtccgga atgtgaactt 480
tgaggatccc agcctctgcc tgtgattcca tcaatgcag gggttaaaaac gaaaccaggg 540
atatgattga caatctgctg tccccagatc ttattgatgg tgtgctcacc agactgggtcc 600
tcgtcaacgc agtgtatttc aagggtctgt ggaaatcacg gttccaaccc gagaacacaa 660
agaaacgcac tttcgtggca gccgacggga aatcctatca agtgccaatg ctggcccagc 720
tctcgtgttt ccggtgtggg tcgacaagtg cccccaatga tttatggtac aacttcattg 780
aactgcccta ccacggggaa agcatcagca tgctgattgc actgccgact gagagctcca 840
ctccgctgtc tgccatcatc ccacacatca gcaccaagac catagacagc tggatgagca 900
tcatggtgcc caagaggggt caggtgatcc tgcccaagtt cacagctgta gcacaaacag 960
at ttgaagga gccgctgaaa gttcttggca ttactgacat gtttgattca tcaaaggcaa 1020
at tttgcaaa aataacaagg tcagaaaacc tccatgtttc tcatactctg caaaaagcaa 1080
aaattgaagt cagtgaagat ggaaccaaag cttcagcagc aacaactgca attctcattg 1140
caagatcatc gcctccctgg tttatagtag acagaccttt tctgtttttc atccgacata 1200
atcctacagg tgctgtgtta ttcattggggc agataaacia accctgaaga gtatacaaaa 1260
gaaacatgc aaagcaacga ctactttgct acgaagaaag actcctttcc tgcacttttc 1320

```

```

atagttctgt taaatatatt tgtacatcgc ttctttttca aaactagttc ttaggaacag 1380
actcgatgca agtgtttctg ttctgggagg tattggaggg aaaaaacaag caggatggct 1440
ggaacactgt actgaggaat gaatagaaag gcttccagat gtctaaaaga ttcttttaac 1500
tactgaactg ttacctaggt taacaaccct gttgagtatt tgctgtttgt ccagttcagg 1560

aatTTTTgtt ttgttttgtc tatatgtgcg gcttttcaga agaaatttaa tcagtgtgac 1620
agaaaaaaaa atgttttatg gtagctttta ctttttatga aaaaaaatt atttgccttt 1680
taaattcttt tcccccatcc ccctccaaag tcttgatagc aagcgttatt ttgggggtag 1740
aaacggtgaa atctctagcc tctttgtgtt tttgttgttg ttgttgttgt tgttttatat 1800
aatgcatgta ttcactaaaa taaaatttaa aaaactcctg tcttgctaga caaggttgct 1860
gttgtgcagt gtgcctgtca ctactggtct gtactccttg gatttgcatt tttgtatttt 1920
gtacaaagta aaaataaact gttatgagta gtaaaaataa agctatttct ctgctattttg 1980
aaaataaaaa aaaaaaaaaa aaaa
2004

```

```

<210>      11
<211>      2128
<212>      DNA
<213>      Homo sapiens

<400>      11

```

```

agactgccgg agagcgcgct ctgcctgccg cctgcctgcc tgccactgag gggtcccagc 60
accatgaggg cctggatctt ctttctcctt tgcctggccg ggagggcctt ggcagcccct 120
cagcaagaag ccctgcctga tgagacagag gtggtggaag aaactgtggc agagggtgact 180
gaggatatctg tgggagctaa tcctgtccag gtggaagtag gagaatttga tgatggtgca 240
gaggaaaccg aagaggaggt ggtggcggaa aatccctgcc agaaccacca ctgcaaacac 300
ggcaagggtg gcgagctgga tgagaacaac acccccatgt gcgtgtgcca ggacccacc 360
agctgcccag ccccatcttg cgagtttgag aagggtgtgca gcaatgacaa caagaccttc 420
gactcttctt gccacttctt tgccacaaag tgcaccctgg agggcaccaa gaagggccac 480
aagctccacc tggactacat cgggccttgc aaatacatcc ccccttgctt ggactctgag 540
ctgaccgaat tccccctgcg catgcgggac tggctcaaga acgtcctggt caccctgtat 600
gagaggggatg aggacaacaa ccttctgact gagaagcaga agctgcgggt gaagaagatc 660
catgagaatg agaagcgctt ggaggcaggg agaccacccc gtggagctgc tggcccggga 720
cttcgagaag aactataaca tgtacatctt ccctgtacac tggcagttcg gccagctgga 780
ccagcacccc attgacgggt acctctccca caccgagctg gctccactgc gtgctcccct 840
catccccatg gagcattgca ccaccgctt ttctgagacc tgtgacctgg acaatgacaa 900
gtacatcgcc ctggatgagt gggccggctg cttcggcatc aagcagaagg atatcgacaa 960
ggatcttgtg atctaaatcc actccttcca cagtaccgga ttctctcttt aaccctcccc 1020
ttcgtgtttc cccaatggt taaaatgttt ggatggtttg ttgttctgcc tggagacaag 1080
gtgctaacat agattttaagt gaatacatca acggtgctaa aatgaaaaat tctaacccaa 1140

```

gacatgacat tcttagctgt aacttaacta ttaaggcctt ttccacacgc attaatagtc 1200
 ccatttttct cttgccattt gtagctttgc ccattgtctt attggcacat ggggtggacac 1260
 ggatctgctg ggctctgcct taaacacaca ttgcagcttc aactttttctc tttagtgttc 1320
 tgtttgaaac taatacttac cgagtcagac tttgtgttca tttcatttca ggggtcttggc 1380
 tgccctgtggg ctttccccag ggtggcctgg gaggtgggca aaggaagta acagacacac 1440
 gatgttgtca aggatgggtt tgggactaga ggctcagtgg tgggagagat ccctgcagaa 1500
 cccaccaacc agaacgtggg ttgcctgagg ctgtaactga gagaaagatt ctggggctgt 1560
 cttatgaaaa tatagacatt ctcacataag ccagttcat caccatttcc tcctttacct 1620
 ttcagtgcag tttcttttca cattaggctg ttggttcaaa cttttgggag cacggactgt 1680
 cagttctctg ggaagtgggc agcgcatcct gcagggtctc tcctcctctg tcttttggag 1740
 aaccagggct cttctcaggg gctctaggga ctgccaggct gtttcagcca ggaaggccaa 1800
 aatcaagagt gagatgtaga aagttgtaaa atagaaaaag tggagttggg gaatcgggtg 1860
 ttctttcctc acatttggat gattgtcata aggttttttag catgttcctc cttttcttca 1920
 ccctccccct tgttcttcta ttaatcaaga gaaacttcaa agttaatggg atggtcggat 1980
 ctcacaggct gagaactcgt tcacctcaa gcatttcatg aaaaagctgc ttcttattaa 2040
 tcatacaaac tctcaccatg atgtgaagag tttcacaaat ctttcaaaat aaaaagtaat 2100
 gacttagaaa ctgcaaaaaa aaaaaaaa 2128

<210> 12
 <211> 2073
 <212> DNA
 <213> Homo sapiens
 <400> 12

agtacacact ggggcttata gggactgagc ctactcaagg gtatatgggtg ctgtgggtca 60
 gagctggggc atggcaggcg attcagtgtg ccttgactcc ccctgtaaatt gtccctctca 120
 gaagccttct tggccttcca gcccttggtt tttgagacaa ccagcagtca tttgttcggt 180
 cctgacattc cttcctgtcc cttccttcca ggttctgtgg acaatcacia tgggaatcca 240
 aggagggtct gtccctgttcg ggctgctgct cgtcctggct gtcttctgcc attcagggtca 300
 tagcctgcag tgctacaact gtcctaacc aactgctgac tgcaaaacag ccgtcaattg 360
 ttcattctgat tttgatgcgt gtctcattac caaagctggg ttacaagtgt ataacaagt 420
 ttggaagtgt gagcattgca atttcaacga cgtcacaacc ccgcttgagg gaaaatgagc 480
 taacgtacta ctgctgcaag aaggacctgt gtaactttaa cgaacagctt gaaaatgggt 540
 ggacatcctt atcagagaaa acagttcttc tgctggtgac tccatttctg gcagcagcct 600
 ggagccttca tccctaagtc aacaccagga gagcttctcc caaactcccc gtccctgcgt 660
 agtccgcttt ctcttgctgc cacattctaa aggcttgata ttttccaaat ggatcctgtt 720
 gggaaagaat aaaattagct tgagcaacct ggctaagata gaggggctct gggagacttt 780
 gaagaccagt cctgtttgca ggaagcccc acttgaagga agaagtctaa gagtgaagta 840
 ggtgtgactt gaactagatt gcatgcttcc tcctttgctc ttgggaagac cagctttgcc 900

```

agtgacagct tgagtgggtt ctctgcagcc ctcagattat ttttcctctg gtccttggga 960
tgtagtcagt tagcatcatt agtacatctt tggaggggtgg ggcaggagta tatgagcatc 1020
ctctctcaca tggaaacgctt tcataaaactt cagggatccc gtgttgccat ggaggcatgc 1080
caaatgttcc atatgtgggt gtcagtcagg gacaacaaga tccttaatgc agagctagag 1140
gacttctggc agggaaagtgg ggaagtgttc cagatagcag ggcatgaaaa cttagagagg 1200
tacaagtggc tgaaaatcga gtttttcctc tgtctttaa ttttatatgg gctttgttat 1260
cttccactgg aaaagtgtaa tagcatacat caatgggtgtg ttaaagctat ttccttgcct 1320
tttttttatt ggaatggtag gatatcttgg ctttgccaca cacagttaca gagtgaacac 1380
tctactacat gtgactggca gtattaagtg tgcttatttt aaatgttact ggtagaaagg 1440
cagttcaggt atgtgtgtat atagtatgaa tgcagtgggg acaccctttg tggttacagt 1500
ttgagacttc caaagggtcat ccttaataac aacagatctg caggggtatg ttttaccatc 1560
tgcattccagc ctctgtctaa ctctagctg actcagcata gattgtataa aatacctttg 1620
taacggctct tagcacactc acagatgttt gaggccttca gaagctcttc taaaaaatga 1680
tacacacctt tcacaagggc aaacttttct cttttccctg tgtattctag tgaatgaatc 1740
tcaagattca gtagacctaa tgacatttgt attttatgat cttggctgta tttaatggca 1800
taggctgact tttgcagatg gaggaatttc ttgattaatg ttgaaaaaaaa acccttgatt 1860
atactctgtt ggacaaaccg agtgcaatga atgatgcttt tctgaaaatg aaatataaca 1920
agtggggtgaa tgtgggttatg gccgaaaagg atatgcagta tgcttaatgg tagcaactga 1980
aagaagacat cctgagcagt gccagcttct ttctgttgat gccgttccct gaacatagga 2040
aaatagaaac ttgcttatca aaacttaaaa aaa 2073

```

```

<210>      13
<211>      253
<212>      DNA
<213>      Homo sapiens

```

```
<400>      13
```

```

gctggctact tctcgtctctg cttcatccca ctattatttt ggcacaacag gaagctgttg 60
aaggaggatg ttcccatctt ggtcagtcct atgcggatag agatgtcttg aagccagaac 120
catgccaaat atgtgtctgt gactcaggat ccgttctctg cgatgacata atatgtgacg 180
atcaagaatt agactgcccc aaccagaaa ttccatttgg agaatgttgt gcagtttgcc 240
cacagcctcc aag 253

```

```

<210>      14
<211>      1749
<212>      DNA
<213>      Homo sapiens
<220>
<221>      1-1749
<222>      unknown
<223>      unsure at all n locations
<400>      14

```

```
tcattgtctgc gagccaggat tcccgatcca gagacaatgg ccccgatggg atggagcccc 60
```

```

aaggcgtcca tcgagagtaa ctggaatgag attgttgaca gctttgatga catgaacctc 120
tcggagtcctt ttctccgtgg catctacgcc tatggttttg agaagccctc tgccatccag 180
cagcgagcca ttctaccttg tatcaagggt tatgatgtga ttgctcaagc ccaatctggg 240
actgggaaaa cggccacatt tgccatatcg attctgcagc agattgaatt agatctaaaa 300
gccacccagg ccttggtcct agcaccctact cgagaattgg ctcagcagat acagaagggtg 360
gtcatggcac taggagacta catgggcgcc tcctgtcacg cctgtatcgg gggcaccaac 420
gtgcgtgctg aggtgcagaa actgcagatg gaagctcccc acatcatcgt gggtagccct 480
ggccgtgtgt ttgatatgct taaccggaga tacctgtccc ccaaatacat caagatgttt 540
gtactggatg aagctgacga aatgttaagc cgtggattca aggaccagat ctatgacata 600
ttccaaaagc tcaacagcaa caccagggtg gttttgctgt cagccacaat gccttctgat 660
gtgcttgagg tgaccaagaa gttcatgagg gacccattc ggattcttgt caagaaggaa 720
gagttgacct tggaggggtat ccgccagttc tacatcaacg tggaacgaga ggagtggaa 780
ctggacacac tatgtgactt gtatgaaacc ctgaccatca ccaggcagt catcttcac 840
aacacccgga ggaaggtgga ctggctcacc gagaagatgc atgctcgaga ttactctgta 900
tccgccatgc atggagatat ggaccaaag gaacgagacg tgattatgag ggagtttcgt 960
tctggctcta gcagagtttt gattaccact gacctgtgg ccagaggcat tgatgtgcag 1020
caggtttctt tagtcatcaa ctatgacctt cccaccaaca gggaaaacta tatccacaga 1080
atcggctcag gtggacgggt tggccgtaaa ggtgtggcta ttaacatggt gacagaagaa 1140
gacaagagga ctcttcgaga cattgagacc ttctacaaca cctccattga ggaaatgcc 1200
ctcaatgttg ctgacctcat ctgagggggt gtcctgccac ccagcccag ccagggtc 1260
atctctgggg gctgaggagc agcaggaggg gggagggaag ggagccaagg gatggacatc 1320
ttgtcatttt ttttctttga ataaatgtca ctttttgagg caaaagaagg aaccgtgaac 1380
attttagaca cccttttctt tggggtaggc tcttgcccca ggcgncggct cttctccnaa 1440
aaaaaaaa cactaatcca tttccctaac ctagtaacct ccagatccca gaggtctctc 1500
tcacctcagc tgagctcctt tgaaagtgat tcaagggact atgtcactca gcctcatttg 1560
ctggacaaaa tctggaggga gaacccctaa aacccctaag tgagggtgcc caggggggtg 1620
tcccagggtg gggggaagca ggggagagaa aatggtagcc atttttacat tgttttgtat 1680
agtattttat gattcaggaa acaaacacaa aattctgaat aaaatgactt ggaaactgaa 1740
aaaaaaaa 1749

```

```

<210>      15
<211>      1232
<212>      DNA
<213>      Homo sapiens

<400>      15

```

```

ttacactccg ctgggtcac catgtgtcac tctgcagct gccaccgac catgaccatc 60
ctgcaggccc cgaccccggc ccctccacc atccggggac ccggcgggg ctccggtcct 120
gagatcttca ccttcgacct tctccggag ccgcagcgg ccctgcccg gcgccccagc 180

```

gcctctcgcg ggacccgaaa ggcagccgc agggttctctt accctcgagt ggtccggcgc 240
cagctgccag tgcaggaacc gaaccagacc aaaaggcttc tctttctgct gctcaccatc 300
gtcttctgcc agatcctgat ggctgaagag ggtgtgccgg cgcctctgcc tccaagagga 360
cgccccctaac gccgcatccc tgggcgcccc cccctgtgtc ccccgctctc gagcccttta 420
atctgacttc ggagccctcg gactacgctc tggacctcag cactttcctc cagcaacacc 480
cggcgcgctt ctaactgtga ctccccgcac tccccaaaaa gaatccgaaa aaccacaaag 540
aaacaccagg cgtacctggt gcgcgagagc gtatcccca ctgggacttc cgaggcaact 600
tgaactcaga aactacagc ggagacgcca cccgggtgctt gaggcgggac cgaggcgac 660
agagaccgag gcgcatagag accgaggcac agcccagctg ggggctaggc ccggtgggaa 720
ggagagcgctc gttaatttat ttcttattgc tcctaattaa tatttatatg tatttatgta 780
cgtcctccta ggtgatggag atgtgtacgt aatatttatt ttaacttatg caaggggtgtg 840
agatgttccc cctgctgtaa atgcaggctc cttgggtattt attgagcttt gtgggactgg 900
tggaagcagg acacctggaa ctgcggcaaa gtaggagaag aaatggggag gactcgggtg 960
ggggaggacg tcccggtcgg gatgaagtct ggtgggtggg cgtaagttaa ggaggtgact 1020
gcctcctcca gcatctcaac tccgtctgtc tactgtgtga gacttcggcg gaccattagg 1080
aatgagatcc gtgagatcct tccatcttct tgaagtcgcc tttaggggtg ctgcgaggta 1140
gaggggtggg ggttgggtgg ctgtcacgga gcgactgtcg agatcgcta gtatgttctg 1200
tgaacacaaa taaaattgat ttactgtctg ca 1232

<210> 16
<211> 1678
<212> DNA
<213> Homo sapiens
<400> 16

gtcgccagga ggagcgcgcg ggcacagggg gcgctgaccg aggcgtgcaa agactccaga 60
attggaggca tgatgaagac tctgctgctg tttgtggggc tgctgctgac ctgggagagt 120
gggcaggctc tgggggacca gacggtctca gacaatgagc tccaggaaat gtccaatcag 180
ggaagtaagt acgtcaataa ggaaattcaa aatgctgtca acgggggtgaa acagataaag 240
actctcatag aaaaaacaaa cgaagagcgc aagacactgc tcagcaacct agaagaagcc 300
aagaagaaga aagaggatgc cctaaatgag accagggaaat cagagacaaa gctgaaggag 360
ctcccaggag tgtgcaatga gaccatgatg gccctctggg aagagtgtaa gccctgcctg 420
aaacagacct gcatgaagtt ctacgcacgc gtctgcagaa gtggctcagg cctgggtggc 480
cgccagcttg aggagtccct gaaccagagc tcgcccttct acttctggat gaatggtgac 540
cgcctcgact ccctgctgga gaacgaccgg cagcagacgc acatgctgga tgtcatgcag 600
gaccattca gccgcgctc cagcatcata gacgagctct tccaggacag gttcttcacc 660
cgggagcccc aggataccta ccactacctg cccttcagcc tgccccaccg gaggcctcac 720
ttcttcttct ccaagtcccg catcgccgc agctttgatg cccttctctc cgtacgagcc 780
cctgaacttc cagccatgt tccagccctt ccttgagatg atacacgagg ctacgaggc 840

```

catggacatc cacttccata gcccggcctt ccagcacccg ccaacagaat tcatacgaga 900
aggcgacgat gaccggactg tgtgccggga gatccgccac aactccacgg gctgcctgcg 960
gatgaaggac cagtgtgaca agtgccggga gatcttgtct gtgggactgt tccaccaaca 1020
acccctccca ggctaagctg cggcgggagc tgcacgaatc cctccaggtc gctgagaggt 1080
tgaccaggaa atacaacgag ctgctaaagt cctaccagtg gaagatgctc aacacctcct 1140
ccttgctgga gcagctgaac gagcagttta actgggtgtc ccggctggca aacctcacgc 1200
aaggcgaaga ccagtactat ctgcgggtca ccacggtggc tccccacact tctgactcgg 1260
acgttccttc cgtgtgact gaggtggtcg tgaagctctt tgactctgat cccatcactg 1320
tgacgggtccc tgtagaagtc tccaggaaga accctaaatt tatggagacc gtggcggaga 1380
aagcgtcgca ggaataccgc aaaaagcacc gggaggagtg agatgtggat gttgcttttg 1440
cacctacggg ggcatctgag tccagctccc cccaagatga gctgcagccc ccagagaga 1500
gctctgcacg tcaccaagta accaggcccc agcctccagg cccccaactc cgcccagcct 1560
ctccccgctc tggatcctgc actctaacac tgcactctgc tgctcatggg aagaacagaa 1620
ttgctcctgc atgcaactaa ttcaataaaa ctgtcttgtg agctgaaaaa aaaaaaaaa 1678

```

```

<210>      17
<211>     1854
<212>      DNA
<213>     Homo sapiens

```

```
<400>      17
```

```

gtctagttag ggacagacca agcacgcaaa acaaattgca atataatgtg ataagttctt 60
taaaagaggt aagagcaacg tgctttggga gcagagaaga gggagaaagc agcatcttgc 120
ctggatgagc caggggacac agaagagaag cccactatct catttaatct ttacaactct 180
cttgcaaggt tccctgggtt gtgaaaatac atgagataaa tcatgaaggc cactatcatc 240
ctccttctgc ttgcacaagt ttcttggggc tggaccgttt caacagagag gcttatttga 300
ctttatgcta ggaagatgag gcttctgggg ataggcccag aagttcctga tgaccgcgac 360
ttcgagcccc tccctagggc ccagtgtgcc ccttccgctg tcaatgccat cttcgagtgg 420
tccagtgttc tgatttgggt ctggacaaag tgccaaagga tcttccccct gacacaactc 480
tgctagacct gcaaaacaac aaaataaccg aaatcaaaga tggagacttt aagaacctga 540
agaaccttca cgcattgatt cttgtcaaca ataaaattag gcaaagttag tcctgggagc 600
atttacacct ttggtgaaag ttggaacgac tttatctgtc caagaatcag ctgaaggaat 660
tgccagaaaa aatgccccaa actcttcagg agctgcgtgc ccatgagaat gagatcacca 720
aagtgcgaaa agttactttc aatggactga accagatgat tgtcatagga actgggcacc 780
aatccgctga agagctcagg aattgaaaat ggggctttcc agggaatgaa ggaagctctc 840
ctacatccgc attgctgata ccaatatcac cagcatcctt caaggctctc ctccttcctt 900
tacgggaatt acatcttgat ggcaacaaaa tcagcagagt tgatgcagct agcctgaaag 960
gactgaataa tttggctaag ttgggattga gtttcaacag catctctgct gttgacaatg 1020
gctctctggc caacacgcct catctgaggg agcttcaact ggacaacaac aagcttacca 1080

```

gagtacctgg tgggctggca gagcataagt acatccaggt tgtctacctt cataacaaca 1140
 atatctctgt agttggatca agtgacttct gccacactgg acacaacacc aaaaaggctt 1200
 cttattcggg tgtgagtctt ttcagcaacc cgggtccagta ctgggagata cagccatcca 1260
 ccttcagatg tgtctacgtg cgctctgcca ttcaactcgg aaactataag taattctcaa 1320
 gaaagccctc atttttataa cctggcaaaa tcttggttaat gtcattgcta aaaaataaat 1380
 aaaagctaga tactggaaac ctaactgcaa tgtggatgtt ttaccacat gacttattat 1440
 gcataaagcc aaatttccag tttaagtaat tgcctacaat aaaaagaaat tttgcctgcc 1500
 attttcagaa tcatcttttg aagctttctg ttgatgttaa ctgagctact agagatattc 1560
 ttatttcact aaatgtaaaa tttggagtaa atatatatgt caatatttag taaagctttt 1620
 cttttttaat ttccaggaaa aaataaaaag agtatgagtc ttctgtaatt cattgagcag 1680
 ttagctcatt tgagataaag tcaaatgcca aacactagct ctgtattaat ccccatcatt 1740
 actggtaaag cctcatttga atgtgtgaat tcaatacagg ctatgtaaaa tttttactaa 1800
 tgtcattatt ttgaaaaaat aaatttaaaa atacattcaa aattaaaaaa aaaa 1854

<210> 18
 <211> 1585
 <212> DNA
 <213> Homo sapiens

<400> 18

gattcggcac gatggaatcc accagctaca tccagctccc tgaggcagag ttgagaatgg 60
 agagaatgtt acctctcctg actctggggc tcttggcggc tgggttctgc cctgctgtcc 120
 tctgccaccc taacagccca cttgacgagg agaatctgac ccaggagaa ccaagaccga 180
 gggacacacg tggacctcgg attagcctcc gccaacgtgg gacttcgctt tcagcctgta 240
 caagcagtta gtctgaaag gccctgata agaatgtcat cttctcccca ctgaggcatc 300
 tccaccgcct tggccttctt gtctctgggg ggcccataat accaccctgg acagagattc 360
 tcaaaggcct caagttcaac ctcacggaga cttctgaggc agaaattcac cagagctttc 420
 cagcacctcc tgcgcacct caatcagtc agcgatgagc tgcaagctga gtatgggaaa 480
 tgccatgttt gtcaaagagc aactcagtc gctggacagg ttcacggagg atgccaagag 540
 gctgtatggc tccgaggcct ttgccactga ctttcaggac tcagctgcag ctaagaagct 600
 catcaacgac tacgtgaaga atggaactag ggggaaaatc acagatctga tcaaggacct 660
 tgactcgag acaatgatgg tcctggtgaa ttacatcttc tttaaagcca aatgggagat 720
 gccctttgac cccaagata ctcatcagtc aaggttctac ttgagcaaga aaaagtgggt 780
 aatggtgccc atgatgagtt tgcacacct gactatacct tacttccggg acgaggagct 840
 gtctgcacc gtggtggagc tgaagtacac aggcaatgcc agcgactct tcacctccc 900
 tgatcaagac aagatggagg aagtggaagc catgctgctc ccagagaccc tgaagcgggtg 960
 gagagactct ctggagttca gagagatagg tgagctctac ctgccaaagt tttccatctc 1020
 gagggactat aacctgaacg acatacttct ccagctgggc attgaggaag ccttcaccag 1080
 caaggctgac ctgtcaggga tcacaggggc caggaaacct gcagctctcc aggtggtcca 1140

```

taaggctgtg cttgatgtat ttgaggaggg cacagaagca tctgctgcca cagcagtcaa 1200
aatcaccctc ctttctgcat tagtggagac aaggaccatt gtgcgtttca acaggccctt 1260
cctgatgata attgtccctt acagacaccc agaacatctt cttcatgagc aaagtcacca 1320
atcccaagca agcctagagc ttgccatcaa gcagtggggc tctcagtaag gaacttggaa 1380
tgcaagctgg atgcctgggt ctctgggcac agcctggccc ctgtgcaccg agtggccatg 1440
gcatgtgtgg ccctgtctgc ttatccttgg aaggtagacag cgattccctg tgtagctctc 1500
acatgcacag gggcccatgg actcttcagt ctggagggtc ctgggcctcc tgacagcaat 1560
aataatttc gttggacacg ttaaa 1585

```

```

<210>      19
<211>     1390
<212>      DNA
<213>     Homo sapiens

<400>      19

```

```

ggcaccacca ctaacctggg acagtgaatc gacaatgccg tcttctgtct cgtggggcat   60
cctcctgctg gcaggcctgt gctgcctggg ccctgtctcc ctggctgagg atccccaggg  120
agatgctgcc cagaagacag atacatccca ccatgatcag gatcaccaa cttcaacaa  180
gatcaccccc aacctggctg agttcgccct cagcctatac cgccagctgg cacaccagtc  240
caacagcacc aatatcttct tctccccagt gagcatcgct acagcctttg caatgctctc  300
cctggggggc caaggctgac actcacgatg aaatcctgga gggcctgaat ttcaacctca  360
cggagattcc ggaggctcag atccatgaag gcttcagga actcctccgt accctcaacc  420
agccagacag ccagctccag ctgaccaccg gcaatggcct gttcctcagc gagggcctga  480
agctagtgga taagtttttg gaggatgtta aaaagttgta ccactcagaa gccttcactg  540
tcaacttcgg ggacaccgaa gaggccaaga aacagatcaa cgattacgtg gagaagggta  600
ctcaagggaa aattgtggat ttgggtcaagg agcttgacag agacacagtt tttgctctgg  660
tgaattacat cttcttttaa ggcaaattgg agagaccctt tgaagtcaag gacaccgagg  720
aagaggactt ccacgtggac caggtgacca ccgtgaagg gcttatgatg aagcgtttag  780
gcatgtttta catccagcac tgtaagaagc tgtccagctg ggtgctgctg atgaaatacc  840
tggggcaatg ccaccgccat cttcttcctg cctgatgagg ggaaactaca gcacctggaa  900
aatgaactca cccacgatat catcaccaag ttcttggaat atgaagacag aaggtctgcc  960
agcttacatt taccaaaact gtccattact ggaacctatg atctgaagag cgtcctgggt 1020
caactgggca tactaagggt cttcagcaat ggggtgacc tctccggggg cacagaggag 1080
gcaccctga agctctccaa ggccgtgcat aaggctgtgc tgaccatcga cgagaaaggg 1140
actgaagctg ctggggccat gtttttagag gccataccca tgtctatccc ccccaggtc 1200
aagttcaaca aaccctttgt cttcttaatg attgaacaaa ataccaagtc tcccctcttc 1260
atgggaaaag tggatgaatc caccacaaaa taactgcctc tcgctcctca acccctcccc 1320
tccatccctg gccccctccc tggatgacat taaagaaggg ttgagctggg ccctgcctgc 1380
atgtgactgt 1390

```

<210> 20
 <211> 1534
 <212> DNA
 <213> Homo sapiens

<400> 20
 ggaagatccc aacagtttgc gccataaata taactttatc gcggacgtgg tggagaagat 60
 cgccccctgcc gtggttcata tcgaattggt tgcgaagctt ccgttttcta aacgagaggt 120
 gccggtggct agtgggtctg ggtttattgt gtcggaagat ggactgatcg tgacaaatgc 180
 ccacgtgggtg accaacaagc accgggtcaa agttgagctg aagaacgggtg ccacttacga 240
 agccaaaatc aaggatgtgg atgagaaagc agacatcgca ctcacaaaaa ttgaccacca 300
 gggcaagctg cctgtcctgc tgcttggccg ctccctcagag ctgcggcccg gagagtctcg 360
 ggtcgccatc ggaagcccg tttcccttca aaacacagtc accaccggga tcgtgagcac 420
 caccagcgga ggcggcaaag agctggggct ccgcaactca gacatggact acatccagac 480
 cgacgccatc atcaactatg ggaaactccg ggaggcccg tagtaaacct ggacggtgaa 540
 gtgattggaa ttaacacttt gaaagtgaca gctggaatct cctttgcaat cccatctgat 600
 aagattaaaa agttcctcac ggagtcccat gaccgacagg ccaaaggaaa agccatcacc 660
 aagaagaagt atattggtat ccgaatgatg tctctcacgt ccagcaaagc caaagagctg 720
 aaggaccggc accgggactt ccagacgtg atctcaggag cgtatataat tgaagtaatt 780
 cctgataccc cagcagaagc tgggtgggtct caaggaaaac gacgtcataa tcagcatcaa 840
 tggacagtcc gtggtctccg ccaatgatgt cagcgacgtt cattaaaagg gaaagcacc 900
 tgaacatggt ggtccgcagg ggtaatgaag atatcatgat cacagtgatt cccgaagaaa 960
 ttgaccataa ggcagaggca tgagctggac ttcatgtttc cctcaaagac tctcccgtag 1020
 gatgacggat gaggactctg ggctgctgga ataggacact caagactttt gactgccatt 1080
 ttgtttgttc agtggagact ccctggccaa cagaatcctt cttgatagtt tgcaggcaaa 1140
 acaaatgtaa tgttgcatg ccgcaggcag aagctctgcc ccttctgtat cctatgtatg 1200
 cagtgtgctt tttcttgcca gcttgggcca ttcttgctta gacagtcagc atttgtctcc 1260
 tcctttaact gagtcatcat cttagtccaa ctaatgcagt cgatacaatg ccgtagatag 1320
 aagaagcccc acgggagcca ggatgggact ggtcgtgttt gtgcttttct ccaagtcagc 1380
 acccaaaggt caatgcacag agacccccgg tgggtgagcg ctggcttctc aaacggccga 1440
 agttgcctct tttaggaatc tctttggaat tgggagcacg atgactctga gtttgagcta 1500
 ttaaagtact tcttacacat tgaaaaaaaa aaaa 1534

<210> 21
 <211> 2559
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> 1-2559
 <222> unknown

<223> unsure at all n locations
 <400> 21

agctgtcgga gcggttagtt cgatttcgag ctcgaggttt ccccgccgc caggtgnact 60
 tctcatcgct tgtttttctt tttgcatttt tctctccacc gccgttgccg cctctcccg 120
 cctggccgct cgccctccgc cctctgcagg gacatctcta caccgttccc atccgggaac 180
 agggcaacat ctacaagccc aacaacaagg ccatggcaga cgagctgagc gagaagcaag 240
 tgtacgacgc gcacaccaag gagatcgacc tgggtcaaccg cgaccctaaa cacctcaacg 300
 atgacgtggt caagattgac tttgaagatg tgattgcaga accagaaggg acacacagtt 360
 ttgacggcat ttgggaaggc cagcttcacc accttcactg tgacgaaata ctggttttac 420
 cgcttgctgt ctgccctctt tggcatcccg atggcactca tctggggcat ttacttcgcc 480
 attctctctt tctgcacat ctgggcagtt gtaccatgca ttaagagctt cctgattgag 540
 attcagtgca tcagccgtgt ctattccatc tacgtccaca cgtctgtga cccactcttt 600
 gaagctgttg ggaaaatatt cagcaatgtc cgcactcaact tgcagaaaga aatataaatg 660
 acatttcaag gatagaagta tacctgattt tttttccttt taattttcct ggtgccatt 720
 tcaagttcca agttgcta acagcaacaa tttatgaatt gaattatctt ggttgaaaat 780
 aaaaagatca ctttctcagt tttcataagt attatgtctc ttctgagcta tttcatctat 840
 ttttggcagt ctgaattttt aaaaccatt taaatttttt tcttacctt tttatttgca 900
 tgtggatcaa ccatcgcttt attggctgag atatgaacat attgttgaaa ggtaatttga 960
 gagaaatatg aagaactgag gagggaaaaa aaaaaaaga aaagaaccaa caacctcaac 1020
 tgcctactcc aaaatgttgg tcattttatg ttaagggag aattccaggg tatggccatg 1080
 gagtgtaaa gtatgtgggc agattttcag caaactcttt tccactgtt taaggagtta 1140
 gtggattact gccattcact tcataatcca gtaggatcca gtgatcctta caagttagaa 1200
 aacataatct tctgccttct catgatccaa ctaatgcctt actcttcttg aaattttaac 1260
 ctatgatatt ttctgtgcct gaatatttgt tatgtagata acaagacctc agtgccttcc 1320
 tgtttttcac attttcttt tcaaataagg tctaactcag caactcgctt taggtcagca 1380
 gcctccctga agacaaaaat tagaatatcc atgacctagt tttccatgag tgtttctgac 1440
 tctgagctac agagtctggt gaagctcact tctgggcttc atctggcaac atctttatcc 1500
 gtagtgggta tggttgacac tagcccaatg aaatgaatta aagtgggacc aatagggctg 1560
 agctctctgt gggctgggca gtccctggga gccagctttc cctgcctctc atcaactgaa 1620
 tgaggtcagc atgtctatcc agcttcgttt attttcaaga ataatacagc tttcctgaat 1680
 ccaaactaat ccatcaccgg ggtggttttag tggctcaaca ttgtgttccc atttcagctg 1740
 atcagtgggc ctccaaggag gggctgtaaa atggaggcca ttgtgtgagc ctatcagagt 1800
 tgctgcaaac ctgaccctg ctcagtaaag cacttgcaac cgtctgttat gctgtgacac 1860
 atggccccct cccctgccag gagctttgga cctaatacaa gcactctctt gccagaaaag 1920
 aagatggggg aggaggcagt aataaaaaga ttgaagtatt ttgctggaat aagttcaa 1980
 tcttctgaac tcaaaactgag gaatttcacc tgtaaacctg agtcgtacag aaagctgcct 2040
 ggtatatcca aaagcttttt attcctcctg ctcataattgt gattctgcct ttggggactt 2100
 ttcttaaacc ttcagttatg attttttttt catacactta ttggaactct gcttgatttt 2160

tgccctcttcc agtcttctctg acactttaat taccaacctg ttacctactt tgactttttg 2220
 catttaaaac agacactggc atggatatag ttttactttt aaactgtgta cataactgaa 2280
 aatgtgctat actgcatact ttttaaatgt aaagatattt ttatctttat atgaagaaaa 2340
 tcacttagga aatggctttg tgattcaatc tgtaaactgt gtattccaag acatgtctgt 2400
 tctacataga tgcttagtcc ctcatgcaaa tcaattactg gtccaaaaga ttgctgaaat 2460
 tttatatgct tactgatata ttttacaatt ttttatcatg catgtcctgt aaaggttaca 2520
 agcctgcaca ataaaaatgt ttaacggtta aaaaaaaaaa 2559

<210> 22
 <211> 981
 <212> DNA
 <213> Homo sapiens

<400> 22

gcggagtcct caactgggag agctgcagct gccgagagga ggagaacgct gaggtcggtc 60
 ggaccaacgg acgcgctgac cgctgccaac tgcagctcgc gctgcctcct gctcgcgccg 120
 tgccactaag gtagtccgcc tttctatgag ccctcccaa gattagctgg gtgcgggggtg 180
 gtgggagccg ttctttgggtg gctgaagccc ctctcctgct gctcctcctg caggtcactc 240
 ccgcctccga gagcccagag ccgagatgga aacgggccag gagctgatcc ccctggccaa 300
 ggagatgatg gccagaagc gcaaggggaa gatggtgaag ctgtacgtgc tggggcagcg 360
 tgctggccct ctctggcggtg gtgctcggcc tgatggagac tgtgtgcagc cccttcacgg 420
 ccgccagacg tctgcgggac caggaggcag ccgtggcgga gctgcaggcc gccctggagc 480
 gacaggctct ccagaagcaa gcctgcagg agaaaggcaa gcagcaggac acggtcctcg 540
 gcggccgggc cctgtccaac cggcagcacg cctcctagga actgtgggag accagcggag 600
 tgggagggag acgcagtaga cagagacaga ccgagaagga agggagagac agagggggcg 660
 cgcgcacagg agcctgactc cgctgggaga gtgcaggagc acgtgctgtt ttttatttgg 720
 acttaacttc agagaaaccg ctgacatcta gaactgacct accacaagca tccaccaaag 780
 gagtttggga ttgagttttg ctgctgtgca gactgcatt gtcatgacat ttccaacact 840
 gtgtgaatta tctaaatgcg tctaccattt tgcactaggg aggaaggata aatgcttttt 900
 atgttattat tattaattat tacaatgacc accattttgc attttgaaat aaaaaacttt 960
 ttataccaaa aaaaaaaaaa a 981

<210> 23
 <211> 835
 <212> DNA
 <213> Homo sapiens

<400> 23

gcactcccaa agaactgggt actcaacact gaggcagatc tgttctttga ggctaaaaac 60
 catgtgctgt accaagagtt tgctcctggg ctgctttgat gtcagtgtctg ctactccacc 120
 tctgcgcgga atcagaagca gcaagcaact ttgactgctg tcttgggata cacagaccgt 180
 attcttcac ctaaatattt tgtgggcttc acacggcagc tggccaatga aggctgtgac 240

atcaatgcta tcattctttca cacaaagaaa aagttgtctg tgtgcgcaaa tccaaaacag 300
 acttgggtga aatatattgt gcgtctcctc agtaaaaaag tcaagaacat gtaaaaactg 360
 tggcttttctt ggaatggaat tggacatagc ccaagaacag aaagaacctt gctgggggtg 420
 gaggtttcac ttgcacatca tggagggttt agtgcttata taatttgtgc ctactggac 480
 ttgtccaatt aatgaagttg attcatattg catcatagtt tgctttgttt aagcatcaca 540
 ttaaagttaa actgtatttt atgttattta tagctgtagg ttttctgtgt ttagctattt 600
 aatactaatt ttccataagc tattttgggt tagtgcaaag tataaaatta tatttggggg 660
 ggaataagat tatatggact ttcttgcaag caacaagcta ttttttaaaa aaaactattt 720
 aacattcttt tgtttatatt gttttgtctc cttaaattgtt gtaattgcat tataaaataa 780
 gaaaaatatt aataagacaa atattgaaaa taaagaaaca aaaagttcaa aaaaa 835

<210> 24
 <211> 981
 <212> DNA
 <213> Homo sapiens

<400> 24
 gcgccccgga gagctcttgc gcgtcttggt cttgcctggt gtcggtggtt agtttctgcg 60
 acttgtgttg ggactgctga taggaagatg tcttcaggaa atgctaaaat tgggcaccct 120
 gcccccaact tcaaagccac agctgttatg ccagatggtc agtttaaaga tatcagcctg 180
 tctgactaca aaggaaaata tgttgtgttc ttcttttacc ctcttgactt cacctttgtg 240
 tgccccacgg agatcattgc ttttcagtga tagggcagaa gaatttaaga aactcaactg 300
 ccaagtgatt ggtgcttctg tgggattctc acttctgtca tctagcatgg ggtcaatata 360
 cctaagaaac aaggaggact gggacccatg aacattcctt tggatatcaga cccgaagcgc 420
 accattgctc aggattatgg ggtcttaag gctgatgaag gcatctcgtt caggggcctt 480
 tttatcattg atgataaggg tattcttcgg cagatcactg taaatgacct ccctgttggc 540
 cgctctgtgg atgagacttt gagactagtt caggccttcc agttcactga caaacatggg 600
 gaagtgtgcc cagctggctg gaaacctggc agtgatacca tcaagcctga tgtccaaaag 660
 agcaaagaat atttctccaa gcagaagtga gcgctgggct gtttttagtg caggctgcgg 720
 tgggcagcca tgagaacaaa acctcttctg tatttttttt ttccattagt aaaacacaag 780
 acttcagatt cagccgaatt gtggtgtctt acaaggcagg cctttcctac aggggggtgga 840
 gagaccagcc tttcttcctt tggtaggaat ggctgagtt ggcgttgtgg gcaggctact 900
 ggtttgtatg atgtattagt agagcaaccc attaatcttt tgtagtttgt attaaacttg 960
 aactgagaaa aaaaaaaaaa a 981

<210> 25
 <211> 1642
 <212> DNA
 <213> Homo sapiens

<400> 25
 gaaaaaggcg agcccgcccc ccctggagac cccggtctca cgagttgac gtcatgacct 60

```

acgtgagggg gacctgcggg tgctgcgact gtgagaagcg ctgtggcgcc ctggacgtgg 120
tcttcgtcat cgacagctcc gagagcattg ggtacaccaa cttcacactg gagaagaact 180
tcgtcatcaa cgtgggtcaac aggctgggtg ccatcgctaa ggacccaag tccgagacag 240
ggacgcgtgt gggcgtggtg cagtacagcc acgagggcac ctttgaggcc atccagctgg 300
acgacgaaca tatcgactcc ctgtcgagct tcaaggaggc tgtcaagaac ctcgagtggg 360
ttgcggggcg cacctggaca ccctcagccc tcaagtttgc ctacgaccgc ctcatcaagg 420
agagccggcg ccagaagaca cgtgtgtttg cgggtggtcat cacggacggg cgccacgacc 480
ctcgggacga tgacctcaac ttgcggggcg tgtgcgaccg cgacgtcaca gtgacggcca 540
tcggcatcgg ggacatgttc cacgagaagc acgagagtga aaacctctac tccatcgcct 600
gcgacaagcc acagcagggt cgcaacatga cgctgttctc ccgacctggt cggttgagaa 660
gttcacgat gacatgggag gacgtcctct gcccgacccc tcagatcgtg tgcccagacc 720
ttccctgcc aacagagctg tccgtggcac agtgacgca ggggccgtg gacatcgtct 780
tcctgctgga cggctccgag cggctgggtg agcagaactt ccacaaggcc cggcgcttcg 840
tgagcaggt ggcgcggcg ctgacgtgg cccggaggga cgacgacct ctcaacgcac 900
gcgtggcgct gctgcagttt ggtggccccg gcgagcagca ggtggccttc ccgtgagcc 960
acaacctcac ggccatccac gaggcgtgg agaccacaca atacctgaac tccttctcgc 1020
acgtggggcg aggcgtggtg cacgccatca atgccatcgt gcgcagccag cgtggcgggc 1080
ggcggaggca cgcagagctg tccttcgtgt tcctcacgga cggcgtcacg ggcaacgaca 1140
gtctgcacga gtcggcgcac tccatgcgca agcagaacgt ggtaccacc gtgctggcct 1200
tgggcagcga cgtggacatg gacgtgctca ccacgctcag cctgggtgac cgtgcgcgcg 1260
tgttccacga gaaggactat gacagcctgg cgcaaccgg cttcttcgac cgcttcatcc 1320
gctggatctg ctagcgccgc cgccggggcc ccgcagtcga gggtcgtgag cccaccccg 1380
ccatgggtgt aagcggggcc ggtcccaca cggccagcac cgctgctcac tcggacgacg 1440
ccctgggcct gcacctctcc agtcctctcc acgggggtccc cgtagccccg gcccccgccc 1500
agccccaggt ctccccaggc cctccgcagg ctgcccggcc tccctccccc tgcagccatc 1560
ccaaggctcc tgacctacct ggcccctgag ctctggagca agccctgacc caataaaggc 1620
tttgaacca aaaaaaaaa aa 1642

```

```

<210>      26
<211>      163
<212>      DNA
<213>      Homo sapiens

```

```

<400>      26

gaccagtttg tcaagaaggg tagctgctgg agggggacac accctctgtc tgatccctta 60
tcaaagagga caaggaaact atagagctga ttttagaata ttttaciaat acatgccttc 120
cattggaatg ctaagatctt ctactgcttc tggggacggg aaa 163

```

```

<210>      27
<211>      1746
<212>      DNA

```

<213> Homo sapiens
 <220>
 <221> 1-1746
 <222> unknown

<223> unsure at all n locations
 <400> 27

```

cagcgcctccc actctcggcc gacacccctc atggccaacc gttacaccat ggatctgact 60
gccatctacg agagcctcct gtcgctgagc cctgacgtgc cegtgccatc cgaccatgga 120
gggactgagt ccagcccagg ctggggctcc tcgggaccct ggagcctgag cccctccgac 180
tcagccccgt ctgggggtcac ctcccgcctg cctggccgct ccaccagcct agtggagggc 240
cgcagctgtg gctgggtgcc cccacccctt ggcttcgcac cgtgggtcc ccgcctgggc 300
cctgagctgt caccctcacc cacttcgccc actgcaacct ccaccacccc ctgcgctac 360
aagactgagc tatgtcggac cttctcagag agtgggcgct gccgctacgg ggccaagtgc 420
cagtttgccc atggcctggg cgagctgcgc caggccaatc gccaccccaa atacaagacg 480
gaactctgtc acaagttcta cctccagggc cgtgccccct acggctctcg ctgccacttc 540
atccacaacc ctagcgaaga cctggcggcc cggggccacc ctctgtgtct tcgccagagc 600
atcagcttct ccggcctgcc ctctggccgc cggacctcac caccaccacc aggcctggcc 660
ggcccttccc tgtcctccag ctctctctcg cctccagct cccaccacc acctggggac 720
cttccactgt naccctctgc cttctctgt gcccctggca ccccttggc tcgaagagac 780
cccacccag tctgttgccc ctcttgccga agggccactc ctatcagcgt ctgggggccc 840
ttgggtggcc tggttcggac cccctctgta cagtccttgg ggatccgacc ctgatgaata 900
tgccagcagc ggcagcagcc tggggggctc tgactctccc gtcttcgagg cgggagtttt 960
tgcaccaccc cagcccgtgg cagccccccg gcgactcccc atcttcaatc gcctctctgt 1020
ttctgagtga caaagtgact gcccggtcag atcagctgga tctcagcggg gagccacgtc 1080
tcttgactg tggctctctgc atggacccca gggctgtggg gacttggggg acagtaatca 1140
agtaatcccc ttttcagaa tgcattaacc cactcccctg acctcacgt ggggcaggtc 1200
cccaagtgtg caagctcagt attcatgatg gtgggggatg gagtgtcttc cgaggttctt 1260
gggggaaaaa aaattgtagc atattttaagg gaggcaatga accctctccc ccacctcttc 1320
cctgccccaa tctgtctcct agaatcttat gtgctgtgaa taataggcct tcaactgccc 1380
tcagttttt atagacctga ggttccagt tctcctggta actggaacct ctctgaggg 1440
ggaatcctgg tgctcaaatt accctccaaa agcaagtagc caaagccgtt gccaaacccc 1500
accataaat caatgggccc tttatttatg acgactttat ttattctaat atgattttat 1560
agtatttata tatattgggt cgtctgcttc ccttgatatt ttcttcttt ttttgtaata 1620
ttgaaaacga cgatataatt attataagta gactataata tatttagtaa tatatattat 1680
taccttaaaa gtctattttt gtgttttggg catttttaaa taaacaatct gagtgtaaaa 1740
aaaaaa

```

1746

<210> 28
 <211> 1884
 <212> DNA

<213> Homo sapiens

<400> 28

```

cgctcgtagcc ccaacctcga cggtcgcgct ggccccggtc gcgtctgcct tggagaagaa 60
gacaaagagc aagggggccct acatctgcgc tctgtgcgcc aaggagttca agaacggcta 120
caatctccgg aggcacgaag ccatccacac gggagccaag gccggccggg tcccctcggg 180
tgctatgaag atgccgacca tggtgccct gagcctcctg agcgtgcccc agctgagcgg 240
agccggcggg ggagggggag aggcgggtgc cggcggcggc gctgccgcag tggccgcccg 300
tggcgtggtg accacgaccg cctcggggaa gcgcacccg aagaaccatg cctgcgagat 360
gtgtggcaag gccttcgcg acgtctacca cctgaaccga cacaagctgt cgcactcgga 420
cgagaagccc taccagtgc cgtgtgccg gcagcgttc aagcgcaagg accgcatgag 480
ctaccacgtg cgctcacatg acggcgctgt gcacaagccc tacaactgct cccactgtgg 540
caagagcttc tcccggccgg atcacctcaa cagtcacgtc agacaagtgc actcaacaga 600
acggcccttc aaatgtgaga aatgtgaggc agctttcgcc acgaaggatc ggctgcgggc 660
gcacacagta cgacacgagg agaaagtgcc atgtcacgtg tgtggcaaga tgctgagctc 720
ggcttatatt tcggaccaca tgaaggtgca cagccagggt cctcaccatg tctgtgagct 780
ctgcaacaaa ggtactggtg aggtttgtcc aatggcggcg gcagcggcag cggccgggca 840
gcggcagcag cggcagcagt agcagccct cccacagctg tgggctccct ctcgggggcg 900
gagggggtgc ctgtgagctc tcagccactt ccctcccaac cctggtgagc tccaagttgg 960
ttgcggggga gaggggagaa tggagtagag tcccttggtg caagctctc tccccctct 1020
tttccacca actcctatct ccctaccaac caaggagcct ccagaaggaa aggaggaaga 1080
aatgttttct taggggaatt cgctagggtt taacgatttg tttctcctgc tcctcttcta 1140
tcagacctga cccacacaa acctgtcccc tcgggtgtgt tgaagtcccc tggacagtgg 1200
gcaggggtgg cagaggacac gagcagccac tgcccgtaac ccctctctc tctgtaagcc 1260
catgccctgt ctcccaggg acttgtgagc ctcttccctc gacggtcctc ttctctcctt 1320
ccagtcctct cccctgctg tctgcagccc ctccccggg agttggtgct ttcttttctt 1380
tttttttttt tttccagggg gagggaggag aggaaggagg gggatcagag ctgtcccaa 1440
gagggaaaagc ggtgagggtt gaggggggc agaagcaggg ccggcaaagg ttgtacctc 1500
ataaggtggt atggggggtt ggggtcaggc cctgaacatc gtcctacttg agaatctgtc 1560
aggggaaaaa gtcaaggga gcaggaggaa gagccaggag gccagaggca gagaagagat 1620
ggagtcttag gggccagggt gagcgagggg tccagggcct agaggtgctt cctgggggcg 1680
ggggaatgca gccagtgtcc ccctccctc ttccaccca gctccagccc tgggtctgtc 1740
ttttcatccc tcttccccac gacagaagaa gttgtggccc tggccatgtc atcgtgttcc 1800
tgtgtccct gcattgacct caccctccac cccttcttt tgccgggacc ccattacaat 1860
aaattttaaa taaaatcctg aaaa 1884

```

<210> 29

<211> 1563

<212> DNA

<213> Homo sapiens

<400> 29

```

tcacctccag gatacagaca gcccccttc agcccagccc agccaggtct cctacaccgc 60
caccatgcca ttcggtaaca cccacaacaa gttcaagctg aattacaagc ctgaggagga 120
gtaccccgac ctacagcaaac ataacaacca catggccaag gtactgacct ttgaactcta 180
caagaagctg cgggacaagg agactccatc tggcttcact gtagacgatg tcatccagac 240
aggagtggac aacccaggtc accccttcat catgaccgtg ggctgcgtgg ctggtgatga 300
ggagtcctac gaagttttca aggaactctt tgaccccatc atctcggatc gccacggggg 360
ctacaaacc acttgacaag cacaagactg acctcaacca ttgaaaacct caaggggtgga 420
gacgacctgg accctaacta cgtgctcagc agccgcgtcc gactggccg cagcatcaag 480
ggctacacgt tgccccaca ctgctccgt ggcgagcgcc gggcggtgga gaagctctct 540
gtggaagctc tcaacagcct gacggcgag ttcaaaggga agtactacc tctgaagagc 600
atgacggaga aggagcagca gcagctcatc gatgaccact tcctgttcga caagcccggtg 660
tccccgctgc tgctggcctc aggcattggc cgcgactggc ccgacgcccg tggatctggc 720
acaatgacaa caagagcttc ctggtgtggg tgaacgagga ggatcacctc cgggtcatct 780
ccatggagaa ggggggcaac atgaaggagg ttttcgcccg cttctgcgta gggctgcaga 840
agattgagga gatctttaag aaagctggcc accccttcat gtggaaccag cacctgggct 900
acgtgctcac ctgcccattc aacctgggca cctgggctgc gtggaggcgt gcatgtgaag 960
cctggcgcac ctgagcaagc accccaagtt cgaggagatc ctcacccgcc tgcgtctgca 1020
gaagaggggt acaggtggcg tggacacagc ctgccgtggg ctcagtattt gacgtgtcca 1080
acgtgatcgt gctgggctcg tccgaagtag aacaggtgca gctgggtggtg gatggtgtga 1140
agctcatggt ggaaatggag aagaagttgg agaaaggcca gtccattgac gacatgatcc 1200
ccgcccagaa gtaggcgcct gccacctgc caccgactgc tggaaccag ccagtgggag 1260
ggcctggccc accagagtcc tgcctccca ctcctcgccc cgccccctgt cccagagtcc 1320
cacctggggg ctctctccac cttctcaga gttccagttt caaccagagt tccaaccaat 1380
gggtccatc ctctggattc tggccaatga aatatctccc tggcagggtc ctcttctttt 1440
cccagagctc caccacaacc aggagctcta gttaatggag agctcccagc acactcggag 1500
cttgtgtctt gtctccacgc aaagcgataa ataaaagcat tgggtggcctt aaaaaaaaaa 1560
aaa 1563

```

<210> 30

<211> 2263

<212> DNA

<213> Homo sapiens

<220>

<221> 1-2263

<222> unknown

<223> unsure at all n locations

<400> 30

```

ctcgagacaa gcccgatatgt gtcaacacct atggaagcta caggtgccgg accaacaaga 60

```

agtgcagtcg gggctacgag cccaacgagg atggcacagc ctgcgtgggg actctcggcc 120
 agtcaccggg cccccgcccc accnnnnnna cncgcgggac cggggctggg agcaagcagg 180
 cggcggcgcc ggcggcagag ggcgcagcga ggcggcgctt cccacgcccc taggcggcgg 240
 ggccgagagc gggaggatgg ctccgagcgc tgaccccggc atgtccagga tgttacggtt 300
 cctgctgctg ctctggtttc tgcccatcac tgaggggtcc cagcgggctg aaccatggtt 360
 cactgcagtc accaactcag ttctgcctcc tgactatgac agtaatccca cccagctcaa 420
 ctatggtgtg gcagttactg atgtggacca tgatggggac tttgagatcg tcgtggcggg 480
 gtacaatgga cccaacctgg ttctgaagta tgaccggggc cagaagcggc tgggtgaacat 540
 cgcggtcgat gagcgcagta acccctacta cgcgctgcgg gaccggcagg ggaacgccat 600
 cggggtcaca gcctgcgaca tcgacgggga cgcccgggag gagatctact tcctcaacac 660
 caataatgcc ttctcggggg tggccacgta caccgacaag ttgttcaagt tccgcaataa 720
 ccggtgggaa gacatcctga gcgatgaggt caacgtggcc cgtggtgtgg ccagcctctt 780
 tgccggacgc tctgtggcct gtgtggacag aaagggctct ggacgctact ctatctacat 840
 tgccaattac gcctacggta atgtggggcc tgatgccctc attgaaatgg accctgaggc 900
 cagtgacctc tcccggggca ttctggcgct cagagatgtg gctgctgagg ctggggtcag 960
 caaatataca gggggccgag gcgtcagcgt gggcccatc ctcagcagca gtgcctcgga 1020
 tatcttctgc gacaatgaga atgggcctaa ctctcttttc cacaaccggg gcgatggcac 1080
 ctttgtggac gctgcggcca gtgctggtgt ggacgacccc caccagcatg ggcgagggtgt 1140
 cgccctggct gacttcaacc gtgatggcaa agtggacatc gtctatggca actggaatgg 1200
 cccccaccgc ctctatctgc aaatgagcac ccatgggaag gtccgcttcc gggacatcgc 1260
 ctcaccaag ttctccatgc cctccctgt cgcacggtc atcacgccc actttgacaa 1320
 tgaccaggag ctggagatct tcttcaacaa cattgcctac cgcagctcct cagccaaccg 1380
 cctcttccgc gtcacccgta gagagcacgg agacccctc atcgaggagc tcaatcccgg 1440
 cgacgccttg gagcctgagg gccggggcac agggggtgtg gtgaccgact tcgacggaga 1500
 cgggatgctg gacctcatct tgtcccatgg agagtccatg gctcagccgc tgtccgtctt 1560
 ccggggcaat cagggcttca acaacaactg gctgcgagtg gtgccaacgc acccggtttg 1620
 gggcctttgc caggggagct aaggctcgtgc tctacaccaa gaagagtggg gccacactga 1680
 ggatcatcga cgggggctca ggctacctgt gtgagatgga gcccggtggca cactttggcc 1740
 tggggaagga tgaagccagc agtgtggagg tgacgtggcc agatggcaag atggtgagcc 1800
 ggaacgtggc cagcggggag atgaactcag tgctggagat cctctacccc cgggatgagg 1860
 acacacttca ggaccagcc cactggagt gtggccaagg attctcccag caggaataatg 1920
 gccattgcca tggacaccaa tgaatgcac cagttcccat tcgtgtgccc tcgagacaag 1980
 cccgtatgtg tcaacaccta tggaaactac aggtgccgga ccaacaagaa gtgcagtcgg 2040
 ggctacgagc ccaacgagga tggcacagcc tgctggctc aagtggcctt tttaggtggg 2100
 tattcttcag ccgcctctag aatctctgag cctctctctc gggcctcata tctttctcta 2160
 ggccttggac tttgccttca gttatatgca ctttaaatcc catcaataaa ggaaaaaaca 2220

aaacaaaact aacagccttt gtggaaaact aaaaaaaaaa aaa

2263

<210> 31
 <211> 2310
 <212> DNA
 <213> Homo sapiens

<400> 31

cggcattcct cctgtagctg cacgaagcac cttggaagtt gttttcaacc atatccagcc 60
 tttgccgaat acatcctatc tgccacacat ccagcgtgag gtccctccag ctacaagggtg 120
 ggcaccatgg cggagaagtt tgactgccac tactgcaggg atcccttgca ggggaagaag 180
 tatgtgcaaa aggatggcca ccaactgctgc ctgaaatgct ttgacaagtt ctgtgccaac 240
 acctgtgtgg aatgccgcaa gcccatcggg gcggactcca aggagggtgca ctataagaac 300
 cgcttctggc atgacacctg cttccgctgt gccaaagtgc ttcaccctt gggccaatga 360
 gacctttgtg gccaaggaca acaagatcct gtgcaacaag tgcaccactc gggaggactc 420
 cccaagtgc aaggggtgct tcaaggccat tgtggcagga gatcaaaacg tggagtacaa 480
 ggggaccgtc tggcacaaag actgcttcac ctgtagtaac tgcaagcaag tcacgtgggac 540
 tggaagcttc ttccctaaag gggaggactt ctactgctg acttgccatg agaccaagtt 600
 tgccaagcat tgcgtgaagt gcaacaaggc catcacatct ggaggaatca cttaccagga 660
 tcagccctgg catgccgatt gctttgtgtg tgttacctgc tctaagaagc tggctgggca 720
 gcgtttcacc gctgtggagg accagtatta ctgcgtggat tgctacaaga actttgtggc 780
 caagaagtgt gctggatgca agaaccctat cactgggttt ggtaaaggct ccagtgtggt 840
 ggcctatgaa ggacaatcct ggcacgacta ctgcttcac tgcaaaaaat gctccgtgaa 900
 tctggccaac aagcgctttg tttccacca ggagcaagtg tattgtcccg actgtgccaa 960
 aaagctgtaa actgacaggg gctcctgtcc tgtaaaatgg catttgaatc tcgttctttg 1020
 tgccttact ttctgcccta taccatcaat aggggaagag tggtccttcc cttctttaa 1080
 gttctccttc cgtcttttct cccattttac agtattactc aaataagggc acacagtgat 1140
 catattagca tttagcaaaa agcaaccctg cagcaaagtg aatttctgtc cggttgcaat 1200
 taaaaatga aaacttaggt agattgactc ttctgcatgt ttctcataga gcagaaaagt 1260
 gctaatacatt tagccactta gtgatgtaag caagaagcat aggagataaa accccactg 1320
 agatgcctct catgcctcag ctgggaccca cccgtgtaga cacacgacat gcaagagttg 1380
 cagcggctgc tccaactcac tgctcaccct cttctgtgag caggaaaaga accctactga 1440
 catgcatggt ttaacttctc catcagaact ctgcccttcc ttctgttctt ttgtgctttc 1500
 aaataactaa cacgaacttc cagaaaatta acatttgaac ttagctgtaa ttctaaactg 1560
 acctttcccc gtactaacgt ttgggtttccc cgtgtggcat gttttctgag cgttcctact 1620
 ttaagcatg gaacatgcag gtgatttggg aagtgtagaa agacctgaga aaacgagcct 1680
 gtttcagagg aacatcgta caacgaatac ttctggaagc ttaacaaaac taaccctgct 1740
 gtccttttta ttgttttta ttaatatatt tgttttaatt gatagcaaaa tagtttatgg 1800
 gtttgaaaac ttgcatgaaa atatttttagc cccctcagat gttcctgcag tgctgaaatt 1860

catcctacag aagtaaccgc aaaactctag aggggggagtt gagcaggcgc cagggtgtgc 1920
 atcaacatgg atatgacatt tcacaacagt gactagttga atcccttgta acgtagtagt 1980
 tgtctgtctt ttgtccatgt gttaatgagg actgcaaagt cctttctggt gtgattccta 2040
 ggacttttcc tcaagaggaa atctggattt ccacctaccg cttacctgaa atgcaggatc 2100
 acctacttac tgtattctac attattatat gacatagtat aatgagacaa tatcaaaagt 2160
 aaacatgtaa tgacaatata tactaacatt cttgtaggag tggtttagaga agctgatgcc 2220
 tcattttctac attctgtcat tagctattat catctaacgt ttcagtgtat ccttacagaa 2280
 ataaagcagc atatgaataa aaaaaaaaaa 2310

<210> 32
 <211> 3342
 <212> DNA
 <213> Homo sapiens
 <400> 32

gaagaagtta agagcttcat ggatcgaaag aagggtttaa cagaagttaa gtcgcagaat 60
 ggagaattca tgaccacaa acttaaacat actgagaata ctttcagccg ccctggaggg 120
 agggccagcg tggacaccaa ggaggctgag ggcgccccc aggtggaagc cggcaaaagg 180
 ctggaggagc ttcgtcgtcg tcgcggggag accgagagcg aagagttcga gaagctcaaa 240
 cagaagcagc aggaggcggc tttggagctg gaggaactca agaaaaagag ggaggagaga 300
 aggaaggtcc tggaggagga agagcagagg aggaagcagg aggaagccga tcgaaaactc 360
 agagaggagg aagagaagag gaggctaaag gaagagattg aaaggcgaag agcagaagct 420
 gctgagaaac gccagaagat gccagaagat ggcttgtcag atgacaagaa accattcaag 480
 tgtttctact ctaaaggttc atctctcaag atagaagagc gagcagaatt tttgaataag 540
 tctgtgcaga aaagcagtgg tgtcaaatcg acccatcaag cagcaatagt ctccaagatt 600
 gacagcagac tggagcagta taccagtgc attgagggaa caaaaagcgc aaaacctaca 660
 aagccggcag cctcggtatc tctgttccct gctgaagggtg tacgcaacat caagagtatg 720
 tgggagaaag ggaatgtgtt ttcattcccc actgcagcag gcacaccaa taaggaaact 780
 gcctggcttg aaggtagggg tttctagccg catcaatgaa tggctaacta aaacccaga 840
 tggaaacaag tcacctgctc ccaaaccttc tgacttgaga ccaggagacg tatccagcaa 900
 gcggaacctc tgggaaaagc aatctgtgga taaggctact ttccccact aaggtttgag 960
 acagttccag aaagaaccca agctcaagac gcaggacgag ctgagttgta gagggctaata 1020
 tcgctctgtt ttgtatttat gttgatttac taaattgggt tcattatctt ttatttttca 1080
 atatcccagt aaacccatgt atattatcac tatatttaat aatcacagtc tagagatgtt 1140
 catggtaaaa gtactgcctt tgcacaggag cctgtttcta aagaaaccca tgctgtgaaa 1200
 tagagacttt tctactgatc atcataactc tgtatctgag cagtgatacc aaccacatct 1260
 gaagtcaaca gaagatccaa gtttaaaatt gcctgcggaa tgtgtgcagt atctagaaaa 1320
 atgaaccgta gtttttgttt ttttaaatc agaagtcag ttgtttctgc actttataat 1380
 aaagcatgga agaaattatc ttagtaggca attgtaacac tttttgaaag taaccatttt 1440

cagatttgaa atactgcaat aatgggtgtc tttaaaaaaa aaaaagaaat gtactgttaa 1500
 ggtattactt tttttcatgc tgatgattca tatctaaatt acattattat gtttagctgac 1560
 agtggtagtg attttttagg ttgggtgttt tgtggatttc tttagtagtg atagtagcct 1620
 gaaccacatt ttagataact caattatgta tgtatgtgca tacacatata caaacacact 1680
 aatggtagaa tgctttttta tgtgctagac tattatatTT agtagtatgt cattgtaact 1740
 agccaatatc acagcttttg aaaaattaaa aaatcacact atattaatat ttcatatTTg 1800
 ccaacagaaa catggcagat aggtatcaat atgttttcaa tgcctgatga cctataagaa 1860
 gaaagtattg aaaagaagag agattagaac tgttagaagg agttgaaatt ttctaaaaga 1920
 catagtattt agttttataat taaatgcatt cttgaagtcc agtgtgaatt ttattaatgc 1980
 tatcatctcg accaagctca aagcctactt attagaacaa atgaagttca caataggtca 2040
 taagggtctt tccttttcta aaattgaaag acaagaaatt tagtgccaat attgtacaga 2100
 cagaaattcc atgtatgagt ctcaacaaag actacctttg gctaaatgtc tagaagcaga 2160
 gaagtaaagt gagcaaaatc cagtgttgag gagtcatgac agtactttga tctttatata 2220
 ctctgaagca tttcttcaaa cttttctact tttatttgtc attgatacct gtagtaagtt 2280
 gacaatgtgg tgaaatttca aaattatatg taacttctac tagttttact ttctcccca 2340
 agtctttttt aactcatgat ttttacacac acaatccaga acttattata tagcctctaa 2400
 gtctttattc ttcacagtag ataatgaaag agtcctccag tgtcttgga aaatgttcta 2460
 gtatagctgg atacatacag tggagttcta taaactcata cctcagtga cttaaccaaa 2520
 attgtgtag tctcaattcc taccacactg aggggagcct ccccaaataa ctattttctt 2580
 atctgcagta ttctccaga agagctaacc aggggcaggg ctggcatgag aagtgcacac 2640
 tgcgttacaa agtctatctt ctcataagt ctgtaaagag caattgaatc ttctagcttt 2700
 agcaaacta agccaaagga aggaaagcca cgaagaatgc agaagtcaaa ccctcatgac 2760
 aaagtaggca caagtctaca ataagctaaa tcagaattta caaatacaag tgtcccaggt 2820
 agcattgact cccgtcattg gagtgaaatg gatcaaagtt tgaattaagg cctatggtaa 2880
 ggtaacattg ctttggtgta cttttgaaca agagctctc ctgatcacta ttacatattt 2940
 ttctagaaaa tctaaagttc agaagagaat gtatcactgc tgacttttat tccaatattt 3000
 ggatggagta agtttttagg tagaattttg ttcagtttg atttaattct ttgaaaagta 3060
 aattccttgt ttactgggtt gactataatt ctctgttate tttacgaggt aaaactgcaa 3120
 gctgactagc atgttctgtg aatctgccat tctaaaaaat tttataaaca cttgatactt 3180
 ttcactgata atggatcgct ccaataaaca tatattgtga aaatgcatcc acaataaatg 3240
 gaattccttc ctgcaaaatg tctttttctc acttattttt atgtacaata ttgatagtga 3300
 gaggtatgtc tattataata aagattatgg cacagtaaaa aa 3342

<210> 33
 <211> 954
 <212> DNA
 <213> Homo sapiens
 <400> 33

cagcctcaag attcacagca tctcagacgc agcctaggcc gcaccaggat gtcggacacc 60
 gaggagcagg aatatgagga ggagcagccg gaagaggagg ctgcggttga ggaggaggaa 120
 gccccgaag agccggagcc ggtggcagag ccagaagagg aacgccccaa accaagccgc 180
 cccgtggtgc ctcttttgat cccgccaaag atcccagaag gggagcgcgt tgacttcgat 240
 gacatccacc ggcaagcgca tggagaaaga cctgctggag ctgcagacac tcatcgatgt 300
 acatttcgag cagcgggaaga aggaggaaga ggagctggtt gccttgaagg agcgcatgtga 360
 gcggcgccgg tcagagagag cccgagcaac agcgcttcag aactgagaag gaacgcgaac 420
 gtcaggctaa gctggcggag gagaagatga ggaaggaaga ggaagaggcc aagaagcggg 480
 cagaggatga tgccaagaaa aagaaggtgc tgtccaacat gggggcccat tttggcggct 540
 acctggtcaa ggcagaacag aagcgtggta agcggcagac ggggcgggag atgaaggtgc 600
 gcatcctctc cgagcgtaag aagcctctgg acattgacta catgggggag gaacagctcc 660
 gggagaaaag ccaggagctg tcggactgga tccaccagct ggagtctgag aagttcgacc 720
 tgatggcgaa gctgaaacag cagaaatatg agatcaacgt gctgtacaac cgcatcagcc 780
 acgcccagaa gttccggaag ggggcagggg agggccgcgt tggaggccgc tggaagtga 840
 gatgccgccc cggacagtgg cacctgggaa gcctgggagt gtttgtcca tcggtagctt 900
 gaaataaacg ctccccctcag acacccgctg ggttctctga tgttattatg gttg 954

<210> 34
 <211> 3183
 <212> DNA
 <213> Homo sapiens

<400> 34

gcgcccacc tacaccagcc aaccagatc ccgaggtccg acagcgcccg gccagatcc 60
 ccacgcctgc caggagcaag ccgagagcca gccggccggc gactccgac tccgagcagt 120
 ctctgtcctt cgacccgagc cccgcgcctt ttccgggacc cctgccccgc gggcagcgct 180
 gccaacctgc cggccatgga gaccccgctc cagcggcgcg ccaccgcag cggggcgag 240
 gccagctcca ctccgtgtc gccaccgc atcaccggc tgcaggagaa ggaggacctg 300
 caggagctca atgatcgctt ggcggtctac atcgaccgtg tgcgctcgct ggaaacggag 360
 aacgcagggc tgcgccttcg catcaccgag tctgaagagg tggtcagccg cgaggtgtcc 420
 ggcataaagg ccgcctacga ggccgagctc ggggatgccc gcaagaccct tgactcagta 480
 gccaaaggag gcgcccgcct gcagctggag ctgagcaaag tgcgtgagga gtttaaggag 540
 ctgaaagcgc ggcaatacca agaaggaggg tgacctgata gctgctcagg ctccgctgaa 600
 ggacctggag gctctgtga actccaagga ggccgactg agcactgctc tcagtgaaga 660
 gcgcacgctg gaggcgagc tgcattgatc gcggggccag gtggccaagc ttgaggcagc 720
 cctaggtgag gccaaagac aacttcagga tgagatgctg cggcgggtgg atgctgagaa 780
 caggctgcag accatgaagg aggaactgga cttccagaag aacatctaca gtgaggagct 840
 gcgtgagacc aagcgccgtc atgagacccg actggtggag attgacaatg ggaagcagcg 900
 tgagtttgag agccggctgg cggatgcgct gcaggaactg cgggcccagc atgaggacca 960



ggtggagcag tataagaagg agctggagaa gacttattct gccaaagctgg acaatgccag 1020
gcagtctgct gagaggaaca gcaacctggt gggggctgcc cacgaggagc tgcagcagtc 1080
gcgcatccgc atcgacagcc tctctgcccc gctcagccag ctccagaagc agctggcagc 1140
caaggaggcg aagtttcgag acctggagga ctactggcc cgtgagcggg acaccagccg 1200
gcggctgcct ggcggaaaag gagcgggaga tggccgagat gcgggcaagg atgcagcagc 1260
agctggacga gtaccaggag cttctggaca tcaagctggc cctggacatg gagatccacg 1320
cctaccgcaa gctcttggag ggcgaggagg agaggctacg cctgtcccc agccctacct 1380
cgcagcgcag ccgtggccgt gcttcctctc actcatcca gacacagggg gggggcagcg 1440
tcacaaaaaa gcgcaaaact gagtccactg agagccgcag cagcttctca cagcacgcac 1500
gcactagcgg gcgcgtgggc cgtggaggag gtggatgagg agggcaagtt tgtccggctg 1560
cgcaacaagt ccaatgagga ccagtccatg ggcaattggc agatcaagcg ccagaatgga 1620
gatgatccct tgctgactta ccggttcccc ccaaagttca ccctgaaggc tgggcagggtg 1680
gtgacgatct gggctgcagg agctggggcc acccacagcc cccctaccga cctggtgtgg 1740
aaggcacaga acacctgggg ctgcgggaac agcctgcgta cggtctctcat caactccact 1800
ggggaagaag tggccatgcg caagctggtg cgctcagtga ctgtggttga ggacgacgag 1860
gatgaggatg gagatgacct gctccatcac caccacggct cccactgcag cagctcgggg 1920
ggaccccgtc gagtacaacc tgcgctcgcg caccgtgctg tgcgggacct gcgggcagcc 1980
tgccgacaag gcatctgccg gcggctcagg agcccagggt ggcggaacca tctcctctgg 2040
ctcttctgcc tccagtgtca cggtcactcg cagctaccgc agtgtggggg gcagtggggg 2100
tggcagcttc ggggacaatc tggtcacccg ctctacctc ctgggcaact ccagcccccg 2160
aaccagagc cccagaact gcagcatcat gtaatctggg acctgccagg caggggtggg 2220
ggtggaggct tcctgcgtcc tcctcacctc atgccaccc cctgccctgc acgtcatggg 2280
agggggcttg aagccaaaga aaaataaccc tttggtttt ttcttctgta ttttttttc 2340
taagagaagt tattttctac agtgggtttt tactgaagga aaaacacaag caaaaaaaaa 2400
aaaaaagcat ctatctcatc tatctcaatc ctaatttctc ctcccttctt tttccctgct 2460
tccaggaaac tccacatctg ccttaaaacc aaagagggtc tcctctagaa gccaaaggga 2520
aggggtgctt ttatagaggc tagcttctgc ttttctgccc tgggctgctg ccccccaccc 2580
gggggaccct gtgacatggt gcctgagagg cagggcatag aggcttctcc gccagcctcc 2640
tctgggacgg caggcttcac tgccagggcc agcctccgag agggagagag agagagagag 2700
gacagcttga gccgggcccc tgggtttggc ctgctgtgat tccactacac ctggctgagg 2760
ttcctctgcc tgccccgcc ccagtccca cccctgccc cagccccggg gtgagtccat 2820
tctcccaggt accaagctgc gcttgctttt ctgtatttta tttagacaag agatgggaat 2880
gaggtgggag gtggaagaag ggagaagaaa ggtgagtttg agctgccttc cctagcttta 2940
gaccctgggt gggctctgtg cagtcactgg aggttgaagc caagtggggg gctgggagga 3000
gggagaggga ggtcactgga aaggggagag cctgctggca cccaccgtgg aggaggaagg 3060
caagaggggg tggaggggtg tggcagtggt tttggcaaac gctaaagagc ccttgctctc 3120

ccattttccca tctgcacccc ttctctcctc cccaaatcaa tacactagtt gtttctaaaa 3180
 aaa 3183

<210> 35
 <211> 207
 <212> DNA
 <213> Homo sapiens

<400> 35
 ccagggttggt ggcgtttttcc acagtaactg tgtatgttcc agcatctgtg tcactctgcat 60
 cgttgatggt cagagcccg c atcaagccaa tgacgcctgg cacaattcgg ccagggtttct 120
 ccaccacaat cttgccatcc ttctctcaga ccacgtcacg ctctttgttt aactcgcagc 180
 tcaagtacaa tggctgtcct ttgacca 207

<210> 36
 <211> 253
 <212> DNA
 <213> Homo sapiens

<400> 36
 atttattaca ttttttcatg cactgtcaag tttatcctcc gtcccctaac ttctctacag 60
 gatacccctt tctggtttgg ttcatgacaa tctgcaggga aagagctgcc ttcaaactcc 120
 tttgcttatt tcttccaaca ccttggaactc ttgaccgatt ttaccatctc aggtttcaga 180
 gccaggagag agccctgcct catcctgagc tgttcatccc catgggtatt ttctgccttt 240
 ctattccctc ttc 253

<210> 37
 <211> 687
 <212> DNA
 <213> Homo sapiens

<400> 37
 tgagccgccg ccgaggattc agcagcctcc cccttgagcc ccctcgcttc ccgacgttcc 60
 gttccccctt gccgccttc tcccgccacc gccgcgccg ccttcgcag gccgggttcc 120
 accgaggaaa aggaatcgta tcgtatgtcc gctatccaga acctccactc tttcgacccc 180
 tttgctgatg caagtaaggg tgatgacctg ctctctgctg gactgagga ttatatccat 240
 ataagaattc aacagagaaa cggcaggaag acccttacta ctgtccaagg gatcgctgat 300
 gattacgata aaaagaaact agtgaaggcg ttttaagaaa agtttgcttg caatggtact 360
 gtaattgagc atccggaata tggagaagta attcagctac aggttgacca acgcaagaac 420
 atatgccagt tcctcgtaga gattggactg gctaaggacg atcagctgaa ggttcatggg 480
 ttttaagtgc ttgtggctca ctgaagctta agtgaggatt tccttgcaat gtagtagaatt 540
 tcccttctct cccttgctac aggttttaaaa acctcacagc ttgtataatg taaccatttg 600
 ggggtccgctt ttaacttga ctagtgtaac tccttcatgc aataaactga aaagagccat 660
 gctgtctagt cttgaagtcc ctcat 687

<210> 38

<211> 609
 <212> DNA
 <213> Homo sapiens

<400> 38

```

ggtgcggggg cccactgctc tgggctcccc cagggagggg gcagagtctc gccaaagtgt 60
cctggagggg tgggagtggg gcctggcatt ctgaacacat ctctgagggg tgggattaat 120
aagacggctc ctgtgcctcc tgctcccaga tcctgactgc tgtcatggcg tgccctctgg 180
agaaggccct ggatgtgatg gtgtccacct tccacaagta ctcgggcaaa gagggtgaca 240
agttcaagct caacaagtca gaactaaagg agctgctgac ccgggagctg cccagcttct 300
tggggaaaag gacagatgaa gctgctttcc agaagctgat gagcaacttg gacagcaaca 360
gggacaacga ggtggacttc caagagtact gtgtcttctc gtcctgcac gccatgatgt 420
gtaacgaatt ctttgaaggc ttcccagata agcagcccag gaagaaatga aaactcctct 480
gatgtggttg gggggtctgc cagctggggc cctccctgtc gccagtgggc actttttttt 540
ttccaccctg gctccttcag acacgtgctt gatgctgagc aagttcaata aagattcttg 600
gaagtttta                                     609

```

<210> 39
 <211> 2539
 <212> DNA
 <213> Homo sapiens

<400> 39

```

ccccttacat ggttctgctg gagagcaagc attttaccag ggatttaatg gagaagctga 60
aaggggagaac cagccgaatt gctggtcttg cagtgtcctt gaccaagccc agtcctgcct 120
caggacatct ctctagtgt acagtgccca aatgatgggt ttggtgttta ctccaattcc 180
tatgggccag agtttctca ctgcagagaa atacagtgga attcgctggg caatggtttg 240
gcttatgaag acttttagttt ccccatcttt cttcttgaag atgaaaatga aaccaaagtc 300
atcaagcagt gctatcaaga tcacaacctg agtcagaatg gctcagcacc aaccttccca 360
ctatgtgcca tgcagctctt ttcacacatg catgctgtca tcagcactgc cacctgcatg 420
cggcgagctc catccaaagc accttcagca tcaaccaga aatcgtctgt gacccctgt 480
ctgattacaa tgtgtggagc atgctaaagc ctataaatac aactgggaca ttaaagcctg 540
acgacagggg tgtggttgct gccaccggc tggatagtcg ttccttttcc tggaatgtgg 600
ccccaggggc tgaaagcgca gtggcttctt ttgtcaccca gctggctgct gctgaagctt 660
tgcaaaaggc acctgatgtg accaccctgc ccgcgaatgt catgtttgtc ttctttcaag 720
gggaaacttt tgactacatt ggcagctcga ggatgggtcta cgatatggag aagggaagtc 780
ttcccgtgca gtagagaat gttgactcat ttgtggagct gggacagggt gccttaagaa 840
cttcattaga gctttggatg cacacagatc ctgtttctca gaaaaatgag tctgtacgga 900
accaggtgga ggatctcctg gccacattgg agaagagtgg tgctggtgtc cctgctgtca 960
tcctcaggag gccaaatcag tcccagcctc tcccaccatc ttcctgcag cgatttcttc 1020
gagctcgaaa catctctggc gttgttctgg ctgaccactc tggccttcc cataacaaat 1080

```

attaccagag tattttacgac actgctgaga acattaatgt gagctatccc gaatggctga 1140
 gccctgaaga ggacctgaac tttgtaacag acactgccaa ggccctggca gatgtggcca 1200
 cgggtgctggg acgtgctctg tatgagcttg caggaggaac caacttcagc gacacagttc 1260
 aggtgatcc ccaaacggtt acccgctgc tctatgggtt tctgattaa agccaacaac 1320
 tcatggttcc agtctatcct cagggcagga cctaagggtc tacttgggtg acgggcctct 1380
 tcaacattac atcgctgtct ccagccccac caacaccact tatgttgtac agtatgcctt 1440
 ggcaaatttg actggcacag tggtaacct cacccgagag cagtgccagg atccaagtaa 1500
 agtcccaagt gaaaacaagg atctgtatga gtactcatgg gtccagggcc ctttgcatte 1560
 taatgagacg gaccgactcc cccggtgtgt gcgttctact gcacgattag ccagggcctt 1620
 gtgctcctgc ctttgaactg agtcagtgga gctctactga atactctaca tggactgaga 1680
 gccgctggaa agatatccgt gcccgatat ttctcatcgc cagcaaagag cttgagttga 1740
 tcaccctgac agtgggcttc ggcatcctca tcttctccct catcgtcacc tactgcatca 1800
 atgccaaagc tgatgtcctt ttcattgctc cccgggagcc aggagctgtg tcatactgag 1860
 gaggacccca gcttttcttg ccagctcagc agttcacttc ctagagcatc tgtcccactg 1920
 ggacacaacc actaatttgt cactggaacc tccctgggcc tgtctcagat tgggattaac 1980
 ataaaagagt ggaactatcc aaaagagaca gggagaaata aataaattgc ctcccttcct 2040
 ccgctccctt tccccatcac cccttcccc tttctcttc cttctctact catgccagat 2100
 tttgggatta caaatagaag cttcttgctc ctgtttaact ccctagttac ccaccctaatt 2160
 ttgcccttca ggacccttct actttttcct tcttgccctg tacctctctc tgcctctcac 2220
 cccacccct gtaccagacc accttcctga ctgggaagga cataaaagg ttaatgtcag 2280
 ggtcaaaacta cattgagccc ctgaggacag gggcatctct gggctgagcc tactgtctcc 2340
 tcccactgt cttttctcca ggccctcaga tggcacatta ggggtggcgt gctgcgggtg 2400
 ggtatccac ctccagccca cagtgtcag ttgtactttt tattaagctg taatatctat 2460
 ttttgttttt gtctttttcc tttattcttt ttgtaaatat atatataatg agtttcatta 2520
 aaatagatta tcccacacg 2539

<210> 40
 <211> 3146
 <212> DNA
 <213> Homo sapiens

<400> 40
 ggagaaggag ctacctcccc acctggggga actgaccgtg gctgaggaga cctccagctc 60
 tctgcgcctg tcttgacgg tagcccaggg cccctttgac tccttcgtgg tccagtacag 120
 ggacacggac gggcagccca gggcagtgcc tgtggccgca gaccagcgca cagtcaccgt 180
 agaggacctg gagcctggca agaaatacaa gtttctgctc tacgggctcc ttgggggaaa 240
 gcgcctgggc ccggtctctg ccctgggaat gacagcccca gaagaggaca caccagcccc 300
 agagtttagc ccagaggccc ctgagcctcc tgaagagccc cgcctaggag tgctgaccgt 360
 gaccgacaca accccagact ccatgcgcct ctcgtggagc gtggcccagg gccctttga 420

ttccttcgtg gtccagtatg aggacacgaa cgggcagccc caggccttgc tcgtggacgg 480
 cgaccagagc aagatccctca tctcaggcct ggagcccagc accccctaca ggttccctcct 540
 ctatggcctc catgaaggga agcgctggg gccctctca gctgaggga ccacagggt 600
 ggctcctgct ggtcagacct cagaggagtc aaggcccgcc ctgtcccagc tgtctgtgac 660
 tgacgtgacc accagtccac tgaggctcaa ctgggaggcc ccaccggggg ccttcgactc 720
 ctccctgctc cgctttgggg ttccatcacc aagcactctg gagccgcatc cgcgtccact 780
 gctgcagcgc gagctgatgg tgccggggac gggcactcgc gccgtgctcc gggacctgcg 840
 ttccgggact ctgtacagcc tgacactgta tgggctgcga ggacccaca aggccgacag 900
 catccaggga accgcccga ccctcagccc agttctggag agccccctg acctccaatt 960
 cagtgaatc agggagacct cagccaaggt caactggatg ccccccacat cccgggcgga 1020
 cagcttcaaa gtctcctacc agctggcgga cggaggggag cctcagagtg tgcaggtgga 1080
 tggccaggcc cggacccaga aactccaggg gctgatccca ggcgctcgt atgaggtgac 1140
 cgtggtctcg gtccgaggct ttgaggagag tgagcctctc acaggcttcc tcaccacggg 1200
 tcttgacggt cccacacagt tgctgcact gaacttgacc gagggattcg ccgtgctgca 1260
 ctggaagccc cccagaatc ctgtggacac ctatgacgtc caggtcacag cccctggggc 1320
 cccgctctg caggcggaga cccaggcag cgcggtggac taccctctgc atgacctgt 1380
 cctccacacc aactacaccg ccacagtgcg tggcctgcgg ggcccaacc tcaactcccc 1440
 agccagcatc accttcacca cagggctaga ggccctcgg gacttgagg ccaaggaagt 1500
 gacccccgc accgcccctg tcaactggac tgagcccca gtccggcccg caggctacct 1560
 gctcagcttc cacacccctg gtggacagaa ccaggagatc ctgctcccag gagggatcac 1620
 atctcaccag ctccctggcc tcttccctc cacctctac aatggcacgg ctccaggcca 1680
 tgtggggcca gagcctcctg ccgccgtgt ccacctctt caccacgggt gggctgcgga 1740
 tccccctccc cagggactgc ggggaggaga tgcagaacgg agccggtgcc tccaggacca 1800
 gcaccatctt cctcaacggc aaccgcgagc ggccctgaa cgtgttttgc gacatggaga 1860
 ctgatggggg cggctggctg gtgtccagc gccgcatgga tggacagaca gacttctgga 1920
 gggactggga ggactatgcc catggttttg ggaacatctc tggagagttc tggctgggca 1980
 atgaggccct gcacagcctg acacaggcag gtgactactc catgcgcgtg gacctgcggg 2040
 ctggggacga ggctgtgttc gccagtacg actcctcca cgtagactcg gctgcggagt 2100
 actaccgctt ccacttgag ggctaccacg gcaccgcagg ggactccatg agctaccaca 2160
 gcggcagtgt cttctctgcc cgtgatcggg accccaacag cttgctcatc tctgcgctg 2220
 tctctaccg aggggcctgg tggtagga actgcccact acgccaacct caacgggctc 2280
 tacgggagca cagtggacca tcagggagtg agctggtacc actggaaggg cttcgagttc 2340
 tcggtgccct tcacggaaat gaagctgaga ccaagaaact ttcgctcccc agcgggggga 2400
 ggctgagctg ctgcccacct ctctgcacc ccagtatgac tgccgagcac tgaggggtcg 2460
 ccccgagaga agagccaggg tccttcacca cccagccgct ggaggaagcc ttctctgcca 2520
 gcgatctcgc agcactgtgt ttacaggggg gaggggaggg gttcgtacgg gagcaataaa 2580

ggagaaactg aggtaccggt ctggcatcgt tcctgccccca tcaactgggtc tggcctgggc 2640
 tgtgggcccc catcccccggt ggctgcagcc gcacttggaag aggtgcgac ttgaggatga 2700
 cactgcagtg gggcaggggc tgcagggagg gcagggcgtc cccggagggc agcagcgtga 2760
 aggcctgcag cagtcgggtc agcaccacga agagctccag gcgcgccagc ggctcgcccc 2820
 ggcacacggt ggcaccgcat ccgaaggcca gagctctgga gttcttgccct ggctccagga 2880
 agcgatcagg ccagaactca tgtggcctct cccagaccgt ctcatccagg tggggcgctt 2940
 ggagggtcgt aatgatgact gtgccctcag ggatgtcgta gccagagatg ctgctggggc 3000
 gtgtgggtggt gtggggcaag gctaaggcca caacggggcg caggcgagc acctcggcga 3060
 tgggtggcatt gagcaagggc agccgtgcac ggtccttgta ggggaccggt gagctggagg 3120
 caccagggtc cagttcgtgg tctagc 3146

<210> 41
 <211> 2898
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> 1-2898
 <222> unknown
 <223> unsure at all n locations
 <400> 41

acagagggtc gtggtcactc tctgaaaagt tcaacttgag agacaaaatg cagtggacct 60
 cctcctgct gctggcaggg ctcttctccc tctcccaggc ccagtatgaa gatgacctc 120
 attggtggtt cactacctc cgcagccagc agtcaccta ctacgatccc tatgacctt 180
 acccgatga gacctacgag ccttaccctt atgggttgga tgaaggcca gcctacacct 240
 acggctctcc atcccccca gatccccggt actgccccca ggaatgcgac tgcccacca 300
 acttccccac ggccatgtac tgtgacaatc gcaacctcaa gtacctgcc ttcgttccct 360
 cccgatgaa gtatgtgtac ttccagaaca accagatcac ctccatccag gaaggcgtc 420
 ttgacaatgc cacagggtc ctctggattg ctctccagg caaccagatc accagtga 480
 aggtgggcag gaaggcttc tccaagctga ggcacctgga gaggtgtac ctggaccaca 540
 acaacctgac ccggtatgcc ggtccccctg ctcgatccct gagagagctc catctcgacc 600
 acaaccagat ctacgggtc cccaacaatg ctctggagg gctgggagac ctacggcct 660
 tgtacctcca acacaatgag atccaggaag tgggcagttc catgaggggc ctccggtcac 720
 tgatcttgct ggacctgagt tataaccacc ttcggaagg gcctgatggg ctgccctcag 780
 ctcttgagca gctgtacatg gagcacaaca atgtctacac cgtccccgat agctacttcc 840
 ggggggcgcc caagctgctg tatgtgcggc tgtcccacaa cagtctaacc aacaatggcc 900
 tggcctcaa cacttcaat tccagcagcc tccttgagct agacctctcc tacaaccagc 960
 tgcagaagat ccccccagtc aacaccaacc tggagaacct ctacctcaa ggcaatagga 1020
 tcaatgagtt ctccatcagc agcttctgca ccgtggtgga cgtcgtgaac ttctccaagc 1080
 tgcagggtgt gcgcctggac gggaacgaga tcaagcgag gncatgcct gccgacgagc 1140
 cctctgcct gcgccttgcc agcctcatcg agatctgagc agccttgga cgggtactg 1200

```

ggcggagagc ccccgtaggca tttggcttga tggtttggtt tggcttttgc tgggaagggtcc 1260
aggatggacc atgtgacaga agtccacggg caccctctgt agtcttcttt cctgtaggtg 1320
gggttagggg gggcgatcag ggacaggcag ccttctgctg aggacatagg cagaagctca 1380
ctctttttcca gggacagaag tgggtgtaga tgggaaggatc cctggatgtt ccaaccccat 1440
aaatctcacg gctcttaagt tcttcccaat gatctgaggt catggaactt caaaagtggc 1500
atggggaata gtatataacc atacttttct aacaatccct ggctgtctgt gagcagcact 1560
tgacagctct cctctgtgct tgggctggct gtgcagttac tctgggctcc catttggtgc 1620
ttctcaaaat atacctcttg ccagctgcc tcttctgaaa tccacttcac ccactccact 1680
ttcctccaca gatgcctctt ctgtgcctta agcagagtca ggagaccca aggcattgtga 1740
gcatctgccc agcaacctgt ggagacaacc cacactgtgt ctgaggggtga aaggacacca 1800
ggagtcactt ctatacctcc ctaacctcac ccctggaaag ccaccagatt ggaggtcacc 1860
agcatgatga taatattcat gacctgatgt gggaggagac agccaacctc aggcttagat 1920
caatgtatag ggctatatat tggcagctgg gtagctcttt gaagggtgat aagacttcag 1980
aagaggaaag gccagacttt gcttaccatc agcatctgca atggggccaaa cacacctcaa 2040
attggctgag ttgagaaagc agccccagta gttccattct tgcccagcac tttctgcatt 2100
ccaaacagca tcctacctgg ggtttttatc caciaaggta gcggccacat ggttttttaa 2160
gtatgagaaa cacagtttgt cctctccttt tatccaagca ggaagattct atacctgat 2220
ggtagagaca gactccaggg cagccctggg acttgctagc ccaaagaagg aggatgtgg 2280
taatctgttt cacctgggtt gtcctaaggc catagttaaa aagtaccagc tctggctggg 2340
gtccgtgaag ccagggccag gcagccaaat cttggcctgt gctgggcata caacctctg 2400
ctttcacatc tctgagctat atcctcatta gtgaagggtg cttttgcttt atagtttggc 2460
tggggagcac ttaattcttc ccatttcaaa aggtaatgtt gcctggggct taaccacct 2520
gccctttggg caaggttggg acaaagccat ctgggcagtc aggggcaagg actgttgag 2580
gagagttagc ccaagtatag gctctgccc gatgccatca catccctgat actgtgtatg 2640
ctttgaagca cttccctga gaagggaaga ggggatcttt ggactagggt cttggctcca 2700
gacctggaat ccacaaaagc caaacagct catttcaaca aaggagctcc gatgtgagg 2760
gcaaggctgc cccctgccc agggctcttc agaaagcatc tgcattgtga caccatcatg 2820
cctttataaa ggatccttat tacaggaaaa gcatgagtgg tggctaacct gaccaataaa 2880
gttattttat gattgcaa 2898

```

```

<210>      42
<211>      854
<212>      DNA
<213>      Homo sapiens
<220>
<221>      1-854
<222>      unknown
<223>      unsure at all n locations
<400>      42

```

```

ttcggcacag cgnggggata caactctgga gtcctctgag agagccacca aggaggagca 60

```

```

ggggagcgac ggccggggca gaagttgaga ccaccagca gaggagctag gccagtccat 120
ctgcatttgt caccacaagaa ctcttaccat gaagaccctc ctactgttgg cagtgatcat 180
gatctttggc ctactgcagg cccatgggaa tttggtgaat ttccacagaa tgatcaagtt 240
gacgacagga aaggaagccg cactcagtta tggcttctac ggctgccact gtggcggtggg 300
tggcagagga tcccccaagg atgcaacgga tcgctgctgt gtcactcatg actgttgcta 360
caaacgtctg gagaaacgtg ggatgtgggc accaaatttc tgagctacaa gtttaggcaa 420
ctcggggagc agaatcacct gtgaaaaca ggactcctgc agaagtcaac tgtgtgagtg 480
tgataaggct gctgccacct gttttgctag aaacaagacg acctacaata aaaagtacca 540
gtactattcc aataaacact gcagagggag caccctcgt tgctgagtcc cctcttcct 600
ggaaaccttc caccagtg cgaatttccc tctctcatal cctccctccc taccctaacc 660
aagttccttg gccatgcaga aagcatccct caccatcct agaggccagg caggagccct 720
tctataccca ccagaaatga gacatccagc agatttccag ccttctactg ctctcctcca 780
cctcaactcc gtgcttaacc aaagaagctg tactccgggg ggtctcttct gaataaagca 840
attagcaaat catg 854

```

```

<210>      43
<211>      471
<212>      DNA
<213>      Homo sapiens

```

```
<400>      43
```

```

caataccatg aagaggaggc tcaggcagct cttaccacat gatacaagag ccggctggtg 60
gaagagtggg gaccagaaag agaatttgct gaagaggaga aggaaaaaaa aaacaccaa 120
aaaaaaaaata aaaaaatcca cacacacaaa aaaacctgcg cgtgaggggg gaggaaaagc 180
agggcctttt aaaaaggcaa tcacaacaac ttttgctgcc agggatgcc ttgctttggc 240
tgagaggatt tctgttggca agttgctgga ttatagttag gagttcccc accccaggat 300
ccgaggggca cagcgcgccc cccgactgtc cgtcctgtgc gctggccgcc ctcccaaagg 360
atgtacccaa ctctcagcca gagatggtgg aggccgtcaa gaagcacatt ttaaaccatgc 420
tgcacttgaa gaagagaccc gatgtcacc agccggtacc caaggcggcg c 471

```

```

<210>      44
<211>     1411
<212>      DNA
<213>      Homo sapiens

```

```
<400>      44
```

```

gccactgctc tgagaatttg tgagcagccc ctaacaggct gttacttcac tacaactgac 60
gatatgatca tcttaattta cttatttctc ttgctatggg aagacactca aggatgggga 120
ttcaaggatg gaatttttca taactccata tggcttgaac gagcagccgg tgtgtaccac 180
agagaagcac ggtctggcaa atacaagctc acctacggca gaagctaagg cgggtgtgtga 240
atttgaaggc ggccatctcg caacttaca gcagctagag gcagccagaa aaattggatt 300
tcatgtctgt gctgctggat ggatggctaa gggcagagtt ggatacccca ttgtgaagcc 360

```

```

agggcccaac tgtggatttg gaaaaactgg cattattgat tatggaatcc gtctcaatag 420
gagtgaaga tgggatgcct attgctacaa cccacacgca aaggagtgtg gtggcgctct 480
tacagatcca aagcaaatTT ttAAAtctcc aggcttccca aatgagtacg aagataacca 540
aatctgctac tggcacatta gactcaagta tggtcagcgt attcacctga gttttttaga 600
ttttgacctt gaagatgacc cagggttgctt ggctgattat gttgaaatat atgacagtta 660
cgatgatgtc catggcctttg tgggaagata ctgtggagat gagcttccag atgacatcat 720
cagtacagga aatgtcatga ccttgaagtt tctaagtgat gcttcagtga cagctggagg 780
tttccaaatc aaatatgttg caatggatcc tgtatccaaa tccagtcaag gaaaaaatac 840
aagtactact tctactggaa ataaaaactt tttagctgga agatttagcc acttataaaa 900
aaaaaaaaag gatgatcaaa acacacagtg tttatgttgg aatcttttgg aactcctttg 960
atctcactgt tattattaac atttatttat ttttttcta aatgtgaaag caatacataa 1020
tttagggaaa attggaaaat ataggaaact ttaaacgaga aaatgaaacc tctcataatc 1080
ccactgcata gaaataacaa gcgttaacat tttcatattt ttttctttca gtcatttttc 1140
tatttgtggt atatgtatat atgtacctat atgtatttgc atttgaaatt ttggaatcct 1200
gctctatgta cagttttgta ttatactttt taaatcttga actttataaa cattttctga 1260
aatcattgat tattctacaa aaacatgatt ttaaacagct gtaaaatatt ctatgatatg 1320
aatgttttat gcattattta agcctgtctc tattgttggga atttcaggtc attttcataa 1380
atattgttgc aataaatatc cttgaacaca c 1411

```

```

<210>      45
<211>     1877
<212>      DNA
<213>     Homo sapiens

```

```

<400>      45

```

```

gttcttgcct agtgagcaga tccagggggt tgtgatctcc gtgattaacc tggagcctag 60
aactggcttc ttgtccaacc ctagggcctg gggccgcttt gacagtgtca tcacaggccc 120
caacggggcc tgtgtggcct gccttctgtg atgaccagtc ccctgatgcc tactctgcct 180
atgtcttggc aagcctggct ggggaggaac tgcaagcagt gggagtcttc tcctaaattc 240
aaccctaatg caattggcgt ccctcagccc tatctcaaca agctcaacta ccgtcggacg 300
gaccatgagg atccacgggt taaaaagaca gctttccaga ttagcatggc ccaagccaag 360
gcccaactca gctgaggaga gcaatgggccc catctatgcc tttgagaacc tccgggcatg 420
tgaagaggca ccaccagtg cagcccaactt ccggttctac cagattgagg gggatcgata 480
tgactacaac acagtccctt tcaacgaaga tgaccctatg agctggactg aagactatct 540
ggcatgggtg ccaagccga tggaaattcag ggctgctat atcaagggtga agattgtggg 600
gccactggaa gtgaatgtgc gatcccgcaa catggggggc actcatcggc ggacagtggg 660
gaagctgtat ggaatccgag atgtgaggag cactcgggac agggaccagc ccaatgtctc 720
agctgcctgt ctggagttca agtgcagtgg gatgctctat gatcaggacc gtgtggaccg 780
caccctggtg aaggctcatc cccagggcag ctgccgtcga gccagtgtga accccatgct 840

```

gcatgagtag ctggtcaacc acttgccact tgcagtcaac aacgacacca gtgagtagac 900
 catgctggca cccttggacc cactgggcca caactatggc atctacactg tcaactgacca 960
 ggaccctcgc acggccaagg agatcgcggt tgggccggtg ctttgatggc acatccgatg 1020
 gctcctccag aatcatgaag agcaatgtgg gagtagccct caccttcaac tgtgtagaga 1080
 ggcaagtagg ccgccagagt gccttccagt acctccaaag caccacagcc cagtccctg 1140
 ctgcaggcac tgtccaagga agagtgcctt cgaggaggca gcagcgagcg agcaggggtg 1200
 gccagcgcca gaggggagtg gtggcctctc tgagatttcc tagagttgct caacagcccc 1260
 tgatcaacta agttttgtgg tacttcaccc tcttctgccc tcatttcatg tgacagccat 1320
 tgtgagactg atgcacaaac tgtcacttgg ttaatttaag cacttctgtt ttcgtgaatt 1380
 tgcttggttg tttcttcatg cctttactta ctttgcacca tgctactgat tggcacgtgg 1440
 cccccacaat ggcacaataa agcccctttg tgaaactgtt ctttaaatga aacacaagaa 1500
 attggccact ggtaaaactc tgcagcttca actgtacttc atttaatgcc attaatgcaa 1560
 atatacttcc tcttcttttt gcatgggttt gccacctct gcaatagtga taatctgatg 1620
 ctgaagatca aataaccaat ataaagcata tttcttggcc ttgctccaca ggacataggc 1680
 aaggccttga tcatagttca tacatataaa tgggtgtgaa ataaagaaat aaaacacaat 1740
 acttttactt gaaatgtaaa taacttattt atttctttgc taaatttgga attctagtgc 1800
 acattcaaag ttaagctatt aaatataggg tgatcatagt tcctctacca agtctggaaa 1860
 agaacatctc ctggtat 1877

<210> 46
 <211> 167
 <212> DNA
 <213> Homo sapiens

<400> 46
 atcaaaaaca tcaactccctc tccctcccta acagtgaata gagagaaggg agactctatt 60
 taagattccc aaacctaatg atcatctgaa tccggggcta agaatgcaga cttttcagac 120
 tgaccccaaga aattctggcc cagccaatct agaggcaagc ctggcca 167

<210> 47
 <211> 1689
 <212> DNA
 <213> Homo sapiens

<400> 47
 cccgcctccg ccacctttct tgggtggctc tccgcctcgt cctccctccg agggccgttg 60
 gtacattcct agtgactcca agcgcttaaa agggggcccg gaggatgaac cccacagatc 120
 tgaacctgat ttgtgtgtgc accgcgtctc cagcgatccc ggatccactg cgctgccagg 180
 gcgcctgggg gtgggtctct tgctgtctct gcgacgacat ccttacgttt cggcactcta 240
 atgctgggtt tgtgcgtgtg tgtctgctta gcggtctagc gggctgttag gctccctcgc 300
 cccagctcc ttggctcgtc cagctcctcc accgcagccc agcagtgaga cgcgcgcgca 360
 gccagctccc cagagatgg aacagaccga agtgctgaag ccacggaccc ttgctgatct 420

```

gatccgcac  ctgcaccagc  tctttgccgg  cgatgaggtc  aatgtagagg  aggtgcaggc  480
catcatggaa  gcctacgaga  gcgacccccc  cgagtgggca  atgtacgcca  agttcgacca  540
gtacagggtat  acccgaaatc  ttgtggatca  aggaaatgga  aaatttaatc  tgatgattct  600
ctgttgggggt  gaaggacatg  gcagcagtat  tcatgatcat  accaactccc  actgctttct  660
gaagatgcta  caggggaaatc  taaaggagac  attatattgcc  tggcctgaca  aaaaatccaa  720
tgagatggtc  aagaagtctg  aaagagtctt  gagggaaaac  cagtgtgcct  acatcaatga  780
ttccattggc  ttacatcgag  tagagaacat  cagccatacg  gaacctgctg  tgagccttca  840
cttgtacagt  ccaccttttg  atacatgcca  tgcctttgat  caaagaacag  gacataaaaa  900
caaagtcaca  atgacattcc  atagtaaatt  tggaatcaga  actccaaatg  caacttcggg  960
ctcgctggag  aacaactaag  gggcaccaaa  ccctctgagg  ttttacttta  aggttcgctg  1020
tatgtttgcc  ttggacaaaa  aggctaccta  ccacgtgcta  tccagtaata  tacttaaata  1080
agccaatact  tagatctact  gtaaggcaga  tgctaattat  aaggcattaa  gtaagcaaat  1140
agtgcctca  gctactgcag  aagaaaagtc  ccactgagga  aaagaaagtc  ttgtgatttt  1200
taaaggcaag  ttttcaagtg  ctctcatagt  tctatcctct  aattccatta  aatccatact  1260
aggagcgtca  gtgagggttt  tcatagcttt  tggaaatact  ttggtctctg  aactgtaatt  1320
agcaagaagt  aaaaacagaa  acgtcaaacg  tcaaattgtt  gctttgttac  ctggaggact  1380
aaatgtagat  gtcttttagt  tactttgtat  gttcttaata  ttggaagata  attttgtgaa  1440
tctgtagatt  ttattttttc  agtcttacct  taciaatttc  ttttctatga  ataatagagg  1500
aacttacggc  actctgccat  ttgttaatga  aaggaagtgc  agaggattta  gaaaagtaca  1560
tgatccccag  accacaacaa  accaaaacat  aaactcatgt  ctgtgtccca  tgggtcatagt  1620
caaagatttt  gtactgctaa  aattaccaa  taatttaa  aaagtggatt  tgaacacaaa  1680
aaaaaaaaa  1689

```

```

<210>      48
<211>     184
<212>      DNA
<213>     Homo sapiens

```

```

<400>      48
agaaaacaat  gaagaatcga  atgaagatga  agactctgag  gctgagaata  ccacactttc  60
tgctacaaca  ctgggctatg  gagaggacgc  cagcctggc  acagggcata  cagggttagc  120
tgcaatccag  cttccaaga  aggctgggga  tataacaaac  aaagctacaa  aagagaagga  180
aagt  184

```

```

<210>      49
<211>     259
<212>      DNA
<213>     Homo sapiens

```

```

<400>      49
cctggccccg  tgggtcctcc  tggcctgacg  ggtcctgcag  gtgaacctgg  acgagaggga  60
agccccggtg  ctgatggccc  ccctggcaga  gatggcgctg  ctggagtcaa  ggggtgatcgt  120

```

ggtagactg gtgctgtggg agtccttggg gcccttgggc cccctggctc ccctggcccc 180
gctggtccaa ctggcaagca aggagacaga ggagaagctg gtgcacaagg ccccatggga 240
ccctcaggac cagctggag 259

<210> 50
<211> 245
<212> DNA
<213> Homo sapiens

<400> 50

gagagaaggg ccaccaggt ctcataggac tgattgggcc cccgggtgag caggagaga 60
aggagatcg gggacttcct gggcctcagg gctcccttgg gcagaagggt gagatgggta 120
tcccaggagc atccggcccc attggtcctg gaggtcccc cgccctcccc ggacctgctg 180
gccccaaagg agccaaagga gccacaggcc caggcggacc caaggagag aagggtgtgc 240
agggc 245

<210> 51
<211> 515
<212> DNA
<213> Homo sapiens

<400> 51

cttgacagaga aagagtcttt tgtgcagcac cctttaaagg gtgactcgtc ccacttgtgt 60
tctctctcct ggtgcagagt tgcaagcaag tttatcagag tatcgccatg aagttcgtcc 120
cctgccttct gctggtgacc ttgtcctgcc tggggacttt gggtcaggcc ccgaggcaaa 180
agcaaggaag cactggggag gaattccatt tccagactgg agggagagat tcctgacta 240
tgcgctccag cagcttgggg caagggtgctg gagaagtctg gcttcgcgtc gactgccgca 300
acacagacca gacctactgg tgtgagtaca gggggcagcc cagcatgtgc caggctttcg 360
ctgctgacct caaatcttac tggaatcaag ccctgcagga gctgaggcgc cttcaccatg 420
cgtgccaggg ggccccggtg cttaggcat ccgtgtgcag ggaggctgga cccagggccc 480
atatgcagca ggtgacttcc agcctcaagg gcagc 515

<210> 52
<211> 281
<212> DNA
<213> Homo sapiens

<400> 52

gcccggggcc ctggacgatg tggagaacct cgccaaattc cacgtggaca ggaaccagct 60
gtccagctac ccctcagctg ccctgagcaa gctacgggtg gtggaggagc tgaagctgtc 120
ccacaacccc ctgaaaagca tcccggacaa tgccttccag tcctttggca gatacctgga 180
gaccctctgg ctggacaaca ccaacctgga gaagttctca gatggtgcct tcctgggtgt 240
aaccacgctg aaacacgtcc atttggagaa caaccgcttg a 281

<210> 53
<211> 252
<212> DNA

<213> Homo sapiens

<400> 53

```

gggacagatc ccagggtgcc cagggagtct ccaagtgcct cactcctccc gccgcaaaca   60
tgacagagaa ctccgacaaa gtccccattg ccctggtggg acctgatgac gtggaattct   120
gcagcccccc ggcgtacgct acgctgacgg tgaagccctc cagccccgcg cggctgctca   180
aggtgggagc cgtgggtcctc atttcgggag ctgtgctgct gctctttggg gccatcgggg   240
ccttctactt aa                                     252

```

<210> 54

<211> 2723

<212> DNA

<213> Homo sapiens

<400> 54

```

gacatagctt ttctcattca ccctcccact tggggctaata gcacagacat gaacatctat   60
tgaggaaaaac cacaaaaaac ttcaaaacag ctacaacggg aaaaagagag ttttgtccca   120
cagtcagcag gccactagtt tattaacttc cagtcacctt gatttttgct aaaatgaaga   180
ctctgcagtc tacactttctc ctgttactgc ttgtgcctct gataaagccc aggcaccacc   240
aaccagcag gactcacgca ttatctatga ttatggaaca gataattttg aagaatccat   300
atttagccaa gattatgagg ataaatacct ggatggaaaa aatattaagg aaaaagaaac   360
tgtgataata cccaatgaga aaagtcttca attacaaaaa gatgaggcaa taacaccatt   420
acctcccaag aaagaaaatg atgaaatgcc cacgtgtctg ctgtgtgttt gtttaagtgg   480
ctctgtatac tgtgaagaag ttgacattga tgctgtacca cccttacc aaagaaatcagc   540
ctatctttac gcacgattca acaaaattaa aaagctgact gccaaagatt ttgcagacat   600
acctaactta agaagactcg attttacagg aaatttgata gaagatatag aagatggtac   660
tttttcaaaa ctttctctgt tagaagaact ttcacttgct gaaaatcaac tactaaaact   720
tccagttctt cctcccaagc tcactttatt taatgcaaaa tacaacaaaa tcaagagtag   780
gggaatcaaa gcaaatgcat tcaaaaaact gaataacctc accttcctct acttggaaca   840
taatgccctg gaatccgtgc ctcttaattt accagaaagt ctacgtgtaa ttcattctca   900
gttcaacaac atagcttcaa ttacagatga cacattctgc aaggctaata acaccagtta   960
catccgggac cgcattgaag agatacgctt ggagggcaat ccaatcgtcc tgggaaagca 1020
tccaaacagt tttatttgct taaaaagatt accgataggg tcatactttt aacctctatt 1080
gggtacaacat ataaatgaaa gtacacctac actaatagtc tgtctcaaca atgagtaaag 1140
gaacttaagt attgggttaa tattaacctt gtatctcatt ttgaaggaat ttaatatatt 1200
aagcaaggat gttcaaaatc ttacatatata taagtaaaaa gtaagactga atgtctacgt 1260
tcgaaacaaa gtaatatgaa aatattttaa cagcattaca aaatcctagt ttatactaga 1320
ctaccattta aaaatcatgt ttttatataa atgccc aaat ttgagatgca ttattcctat 1380
tactaatgat gtaagtacga ggataaatcc aagaaacttt caactctttg cctttcctgg 1440
cctttactgg atcccaaaag catttaaggt acatgttcca aaaactttga aaagctaaat 1500

```

gtttcccatg atcgcctcatt cttctttttat gattcatacg ttattcctta taaagtaaga 1560
 actttgtttt cctcctatca aggcagctat tttattaaat ttttcactta gtctgagaaa 1620
 tagcagatag tctcatattht aggaaaactt tccaaataaa ataaatgtta ttctctgata 1680
 aagagctaata acagaaatgt tcaagttatt ttactttctg gtaatgtctt cagtaaaata 1740
 ttttctttat ctaaataatta acattctaag tctacaaaaa aaagttttta actcaagcag 1800
 gccaaaacca atatgcttat aagaaataat gaaaagttca tccatttctg ataaagttct 1860
 ctatggcaaa gtcttttcaaa tacgagataa ctgcaaaaata ttttcttttt atactacaga 1920
 aatgagaatc tcatcaataa attagttcaa gcataagatg aaaacagaat attctgtggt 1980
 gccagtgcac actaccttcc caccataca catccatggt cactgtaaca aactgaatat 2040
 tcacaataaa gcttctgagt aacactttct gattactcat gataaactga catggctaac 2100
 tgcaagaatt aaatcttcta tctgagagta ataatttatg atgactcagt ggtgccagag 2160
 taaagtttct aaaataacat tcctctcact tgtacccccc taaaagtatt agtctacaca 2220
 ttacattgaa gttaaacaca aaattatcag tgttttagaa acatgagtcc ggactgtgta 2280
 agtaaaagta caaacattat ttccaccata aagtatgtat tgaaatcaag ttgtctctgt 2340
 gtacagaata catacttatt cccattttta agcatttgct tctgttttcc ctacctagaa 2400
 tgtcagatgt ttttcagtta tctccccatt tgtcaaagtt gacctcaaga taacattttt 2460
 cattaaagca tctgagatct aagaacacaa ttattattct aacaatgatt attagctcat 2520
 tcacttattt tgataactaa tgatcacagc tattatacta ctttctcgtt attttgtgtg 2580
 catgcctcat ttccctgact taaacctcac tgagagcgca aaatgcagct ttatactttt 2640
 tactttcaat tgcctagcac aatagtgagt acatttgaat tgaatatata ataaatattg 2700
 caaaataaaa tccatctaaa tag 2723

<210> 55
 <211> 310
 <212> DNA
 <213> Homo sapiens

<400> 55

gcgccccgcc gccgtgctg cccccagccc cggccccagg cgtcccagcc atgggtccgcc 60
 caatgctctt gctcagctc ggctcctgg ctggtctgct gccggcgctg gccgcctgcc 120
 cccagaactg ccactgccac agcgacctgc agcacgtcat ctgcgacaag gtgggggctgc 180
 agaagatccc caagggtgtca gagaagacca agctgctcaa cctacagcgc aacaacttcc 240
 cgggtgctggc tgccaattcg ttccggggcca tgccgaacct cgtgtcattg cacctgcagc 300
 actgccagat 310

<210> 56
 <211> 274
 <212> DNA
 <213> Homo sapiens

<400> 56

atztatgaaa tcataaaacc tgcaacagcc aactcgaaat tccccgtgac cagtcttttg 60

```

gacaccaggg acagcaatga gcctgactct cctgcatctc ctttgtctga ggcataagacc 120
actgactgct tatggaaaag aacagataat gatatccgtc tcctgcttcc acccaccact 180
caatgtaact ttctgccatg aacataacca gccacacata aactgtctgc agaaaaggaa 240
gttccatcct ataagcttgg caggaggata aaga 274

<210>      57
<211>      153
<212>      DNA
<213>      Homo sapiens

<400>      57

aattttaaga ttttaactta cacaaaaagt ccacttacaa gcatttatct catttacatg 60
tattcacctt ttccatttct taatagttta tctagattac ttctgaaaac tgagatatta 120
cacaaaacta atcattatth aaagttatth ccg 153

<210>      58
<211>      225
<212>      DNA
<213>      Homo sapiens

<400>      58

tgatggtaag ttgtttcagg cataaaatth gaaataaatt atgaggctcc atgatatgct 60
atattggtth taccttcaga agaataatth gtttctactca ggthtttcaa agctacgctg 120
tcccccaaaa aacgaaacaa aacaaaaaaa caacctthtt aagagttgat ggctactcat 180
ttgatctgcc tcctctgctg aatcaattag gaathttthtt ttttt 225

<210>      59
<211>      448
<212>      DNA
<213>      Homo sapiens

<400>      59

ggaagcgtcc aaagagggac ggctgtcagc cctggcttga ctgagaaccc accagctcat 60
cccagacacc tcatagcaac ctatthtatac aaagggggaa agaaacacct gagcagaatg 120
gaatcattat tthtttccca aggagaaaac cggggtaaaag ggagggaagc aattcaatth 180
gaagtccttg tgaatgggct ttcagaaggc aattaaagaa atccactcag agaggacttg 240
gggtgaaact tgggtcctgt ggthtttctga ttgtaagtgg aagcaggtct tgcacacgct 300
gttggcaaat gtcaggacca ggttaagtga ctggcagaaa aacttccagg tggacaagc 360
aaccaggtt ctgctgcaag cttggaagga gcctggagcg ggagaaagct aacttgaaca 420
tgacctgttg catttgga gttctagc 448

<210>      60
<211>      59
<212>      DNA
<213>      Homo sapiens

<400>      60

atgacattgg ttgcctcagc cctgaaaagc tatgtctctg cattcttagt tttctttgt 59

```

<210> 61
 <211> 321
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> 1-321
 <222> unknown

<223> unsure at all n locations
 <400> 61

```

attaattgcc agtagttgta aggaggagtc agcatctagt gttactccct nnnnnnnnnn   60
nnnnnnnnnn nnnntccagg tactggctaa tggagctact gccaccteta aacctctcca 120
gccactaggc tgtgtcccac agtcagtgtc acccagtga caggcattac cccacatct 180
ggaaccagcc tggccccaag ggctacggca taactcagta ccaggtagag ttggcccccac 240
agagtacctt tccccagata tgcaacgcca gcgaaagacc aagcgcaaaa ccaaagagca 300
gctggctatc cttaaatect t
                                                    321

```

<210> 62
 <211> 252
 <212> DNA
 <213> Homo sapiens

<400> 62

```

tttcctaata atttaaatta ttccttataa accagtagaa aagctttaac aacataacag   60
aaaaatggga aaagactatg aatagacggg acccagaaaa gcacatacaa ataagtggct 120
atcttactac acctttactt tggaaaactt caaacctgta ctaaaataga atagggcagt 180
gaacctccct gcctgcaccc atcactcagc gtcaacattg atcaactcat gggcaatctt 240
gttttatcta tt
                                                    252

```

<210> 63
 <211> 218
 <212> DNA
 <213> Homo sapiens

<400> 63

```

cacaagttaa aacttcccat gtataaaaac acttacattt taaaacatca ctgccaaactg   60
tgtgtcatg tgggagtaca gatgtgtata tacagacatg tacattttta aagacttggc 120
tgtctctgca gtgaagacaa tatgttttat tttttattcc atatacttct ctgtattttc 180
tatatttgct tcaataagct ggtgtaactt ttaatttt
                                                    218

```

<210> 64
 <211> 235
 <212> DNA
 <213> Homo sapiens

<400> 64

```

gatcaaatcg gaaaggtaaa gatgaaatgc ttttcctggt tcttgatttt tatctaccag   60
caataatatg aggcacactc gtaaagtaaa ggtttgcat atattttaca ttaaaactta 120
gaaaagcata attctgagct aaatattctg cctaaagaat ctctttcaca taatccttcc 180

```

tggtcacttg ctccttgac tcacaatttg tttcttaatt cctatgcttt ttatc 235

<210> 65
 <211> 239
 <212> DNA
 <213> Homo sapiens

<400> 65

tgccgctttg ttgagccctt aaaataccac ctcctcatgt gtaaattgac acaatcacta 60
 atctggtaat ttaaacaatt gagatagcaa aagtgtttta cagactagga taattttttt 120
 ttcataattg ccaaaatttt tgtaaaccct gtcttgtcaa ataagtgtat aatattgtat 180
 tattaattta tttttacttt ctataccatt tcaaaacaca ttacactaag gggaacca 239

<210> 66
 <211> 243
 <212> DNA
 <213> Homo sapiens

<400> 66

ggaaactcca ggctcctggg tttccctgg gcggggaaag agaagactga aacatctgtg 60
 tgacattcag atttttcaga ggtctgccca agggctctgg ttttattttg cttgaatata 120
 agttctgaca ggaaagggca ccagggtgcg gggtcattga aaacaaagt gacagtttag 180
 attagcaggc actcaccatg gtccctcccc ctcctcagc atgaaaacca gcaggagaaa 240
 ttc 243

<210> 67
 <211> 250
 <212> DNA
 <213> Homo sapiens

<400> 67

gtctgtgtac catcttacct ggaatagaga ttgtgttaaa ttaacagatc atctgactga 60
 gaggtttttt tcccccaaaa cagaagcaaa taaacattat tttgttcctt tgggtataact 120
 ttcatagaac agttatatag tgctttggaa gtatcaagtc ctgtgctaaa taaatgctgg 180
 agatacaaaa gccctgacc tcagaatgtc atagtcttgg ggtaagaaaa aattcattct 240
 gtgcccagg 250

<210> 68
 <211> 213
 <212> DNA
 <213> Homo sapiens

<400> 68

cagggtgtgaa ccaactgcacc tggcccaaaa tctcttgatt gatacagtcc tctttatttt 60
 tcaagatcaa gttatgatac ctttaccac agtcatacat tcttttgga ctttgcacaa 120
 tagtcatatg ttcttttaga actttacact tctattcttt attgccctgt attataattg 180
 cttgtatgcc tgactcctct acatgactgt atg 213

<210> 69

<211> 198
 <212> DNA
 <213> Homo sapiens

<400> 69

cataaaccta ctttatcatc ctctcctaaa gggaaaagag aagatttagc tagaataatt 60
 attaacagaa gatgtggaga tacagaagaa actagaaaat atctcacaat caatacatct 120
 ttcaagcagt caatcatttg tcaactcatat tgctttttta aaccagctt tacatggaag 180
 gaataaatgg aactccag 198

<210> 70
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 70

aaaaaaagga aaaaaaaaat tgccttaagt catatagatt gtaccagcag ctctcacagt 60
 gtggactttg gacttctagg agtccccagg aaccttttag gggatgccta cgaggaggtc 120
 caaactgttt tcataagaac gctaagggtgc tatgtgcctt ttttaactcat tctctcacga 180
 gtgttcagtg gagttttcca gaggctctgt gacatgggtga catcactctg ataattagta 240
 gaatgtgtgt gtgtgtactt ttgttttcta gaatattgta aattgataga tttaggggat 300
 aaatatatgt gttttcagag attaactcag tttgctgcca gtgcttctac tgtgctctta 360
 ctggctattt tcattttatac ctgctgctga gtc 393

<210> 71
 <211> 216
 <212> DNA
 <213> Homo sapiens

<400> 71

ctctacttgt atgaccctag gaatagattg gaatactgca gaggaccaa gctgaggcat 60
 gctaaacagc tgcttggagg tggaagcaag ttcagtcacc tactcagctt cctctctcca 120
 ccaccagtt cctccctcag tatcacatta tttttttctt ctgcttttca ttaacctaac 180
 tcattctatc agtacaacca ttttcttatt ctctaa 216

<210> 72
 <211> 166
 <212> DNA
 <213> Homo sapiens

<400> 72

caaatattta acagaactaa tggaactatt ttagtatgct ttcccctggg ctggagtgt 60
 ggctaagact ttattttaa acaggatgga tgggtgtttg actgaagatg cctccaactt 120
 ttgctcttct gttttttatt tgatgtgctc aagcttctaa ttccct 166

<210> 73
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 73

tgataggcag ctaaaactgt tatgccact gtgctcaatt tgaagcagaa ttcagtgaaa 60
aattatTTTT ccacattgaa acactttgca gacacaaata tctatgaaaa gatgctttgt 120
cagccactgt gcctTTTTTT ctgtgaagac tcaacggatg tgtgtgtttg tatgtttgtt 180
aacagttaca tatgtttgta tgagtgtata tatatatctg tgtgtgtgta tctctaactg 240

<210> 74

<211> 291

<212> DNA

<213> Homo sapiens

<400> 74

tggaccccc gctgaggagt cctgctcaag acacggtcac tggatctgag aaacttccca 60
ggggaccgca ttccagagtc agtgactctg tgaagcacc acatctacct cttgccacgt 120
tcccacgggc ttgggggaaa gatgggtggg accaaggcct ggggtgttctc cttcctggtc 180
ctggaagtca catctgtgtt ggggagacag acgatgctca cccagtcagt aagaagagtc 240
cagcctggga agaagaaccc cagcatcttt gccaaagcctg ccgacaccct g 291

<210> 75

<211> 283

<212> DNA

<213> Homo sapiens

<400> 75

ctccgccagc ctccgggaga ggagccgcac ccggccggcc cggccccagc cccatggacc 60
tccgagcagg ggactgcgtg ggggatgtta gcgtgcctgt gcacggtgct ctggcacctc 120
cctgcagtgc cagctctcaa tcgcacaggg gaccagggc ctggccccctc catccagaaa 180
acctatgacc tcacccgcta cctggagcac caactccgca gcttggctgg gacctatctg 240
aactacctgg gcccccttt caacgagcca gacttcaacc etc 283

<210> 76

<211> 139

<212> DNA

<213> Homo sapiens

<400> 76

ccttcgtgaa gtcgcaaac ctctctgagc cccagtcatt gctagtaaga cctgcctttg 60
agttggtatg atgttcaagt tagataacaa aatgtttata cccattagaa cagagaataa 120
atagaactac atttcttgc 139

<210> 77

<211> 669

<212> DNA

<213> Homo sapiens

<400> 77

ctggctggag cagcgagtct gtcgatccca ggccagagac aaggcagaca aaggttcatt 60
tgtaaagaag ctcttccag cactcctct cttctcctt tgcccaaact caccagtgga 120

gtgtgagcat ttaagaagca tcctctgccca agaccaaaaag gaaagaagaa aaagggccaa 180
aagccaaaat gaaactgatg gtacttgttt tcaccattgg ggctaacttt gctgctagga 240
gttcaagcca tgcttgcaaa tcgcctctct tgctacagaa agatactaaa agatcacaaac 300
tgtcacaaac ttccggaagg agtagctgac ctgacacaga ttgatgtcaa tgtccaggat 360
catttctggg atgggaaggg atgtgagatg atctgttact gcaacttcag cgaattgctc 420
tgctgcccac aagacgtttt ctttgacca aagatctctt tcgtgattcc ttgcaacaat 480
caatgagaat cttcatgtat tctggagaac accattcctg atttcccaca aactgcacta 540
catcagtata actgcatttc tagtttctat atagtgcatt agagcataga ttctataaat 600
tcttacttgt ctaagacaag taaatctgtg ttaaacaagt agtaataaaa gttaattcaa 660
tctaaaaaa 669

<210> 78
<211> 486
<212> DNA
<213> Homo sapiens

<400> 78

ggacgccatc tctgaggccc aaggccacag tgaaatcaca gaagcaacac agctgggaaa 60
ggactcgatg gaagagctgg gaaaagccaa acccaccacc cgaccacag ccaaactac 120
ccagcctgga ccaggcccg gagggaaatga ggaagcaaag aagaaggcct gggaacattg 180
ttggaaaccc ttccaggccc tgtgcgcctt tctcatcagc ttcttccgag ggtgacaggt 240
gaaagacccc tacagatctg acctctccct gacagacaac catctctttt tatattatgc 300
cgctttcaat ccaacgttct cacactggaa gaagagagtt tctaatacaga tgcaacggcc 360
caaattcttg atctgcagct tctctgaagt ttggaaaaga aaccttcctt tctggagttt 420
gcagagtcca gcaatatgat agggacacagg tgctgatggg cccaagagtg acaagcatac 480
acaact 486

<210> 79
<211> 752
<212> DNA
<213> Homo sapiens
<220>
<221> 1-752
<222> unknown

<223> unsure at all n locations
<400> 79

ggggctacga gcccacag gatggcacag cctgcgtggg gactctcggc cagtcaccgg 60
gccccgcnc caccacccc ancnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120
nnnnngccac tgetgcaccg gtcctcgtag atggagatct caatctgggg tcggtggtta 180
aggagagctg caagcccagc tgctgagcag ggggtgggac atgaaccagc ggatggagtc 240
cagcagggga gtgggaaagt gggcttgtgc tgctgcctag acagtaggga tgtaaaggcc 300
tgaggagctag acctcccca agccatcca tgcacattac ttagctaaca attagggaga 360
ctcgtaaggc caggccctgt gctgggcaca tagctgtgat cacagcagac agggtcgctg 420

ccctgatggc gcttacattc cagtgggtct aatgaccata tcttaggaca cagatgtgcc 480
cagggaggtg gtgtcactgc acaggaagta tgaggacttt agtgtcctga gttcaaatcc 540
tgattcagga actcacaaag ctatgtgacc ttacaccagt cacttaactt gttagccatc 600
cattatcgca tctgcaaaat ggggattaag aatagaatct tggggttagt gtggagatta 660
gattaaatgt atgtaagaca cttggcacia aacctggnac atagtaaagg ctcaataaaa 720
acaagtgcct ctcactgggc tttgtcaaca cg 752

<210> 80
<211> 552
<212> DNA
<213> Homo sapiens
<220>
<221> 1-552
<222> unknown
<223> unsure at all n locations
<400> 80

aaatatattc tcaacatttt cagtgagaat ttcttgtaat ggcacctcaa atnttatact 60
cttaaaaaan aacaataatt tgtgaattac caccaaaagg caatggcagt cctacattta 120
agaatagagc tatgcaaact ctgttaaaaa ctatgaggaa aacttatatt agaacttttg 180
atatatacta aaatactgat tatcttaatc acattttccc cagagataaa cattgagaga 240
acgaaagcca aagtgtcatt taagagagat atatatgaaa aagtaacatt aatatataga 300
actttaccat caccagccgt agttgataga aaatattagt ttcagaatta ccctccttta 360
aaaaataaga gactattttgt tttcttttaa tttctatgaa taaaagaaat ttttaaaaac 420
tttaaaattt taaatattag tcaaaatact ttttaagtcc tgagtgccta caggtagttg 480
ttaaaaaaat tttaaggcca ggcatggtgg ctgcgtcaca cctataatcc taggatctgg 540
gaggtcgagg ca 552

<210> 81
<211> 135
<212> DNA
<213> Homo sapiens
<400> 81

ttcactcttc aaatgtttgc ttctgttcc tgctaccctg aacctgctg ttgaggggtt 60
ctagtgtcta caaggggaacc gctgccacca cgaggaataa cacagtgtc ttacagcctg 120
ttccaagtgt ggctt 135

<210> 82
<211> 225
<212> DNA
<213> Homo sapiens
<400> 82

ggagaatgtg acatagattt gctggcacat gggtttccta tgagcaaacc ccagaattgg 60
acacacgtat ctgggtgtgc attggaatca tccgaaaaaa ccaaggcttg cattgcatat 120
ctatctgctg tctgctgaag gagccctgtc tgtgtgccca aggaagtgac atccttgcca 180

agggctgtcc ctgttgcagg agatgaagga gccctgtcta tgtgc